# 13.
# 临床实验室自动化


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# 13.2 背景介绍

## 13.2.1 背景

the integration or interfacing of automated or robotic transport systems, analytical instruments, and pre- or post-analytical process equipment such as automated centrifuges and aliquoters, decappers, recappers, sorters, and specimen storage and retrieval systems. 临床实验室包括集成和连接下述设备：自动化的或摇控的传递系统、分析仪器、分析前/后处理设备，如：自动离心分离机、取盖器、盖盖器、样本分类器、标本的存储和提取系统等。 In addition to the electrical and mechanical interfaces of these various components, the computers that control these devices or instruments must also be interfaced to each other and/or the Laboratory Information System (LIS). 除了这些不同组件的电的或机械接口之外，控制上述设备的计算机还必须在彼此之间及和实验室信息系统（LIS）接口。

The types of information communicated between these systems include process control and status information for each device or analyzer, each specimen, specimen container, and container carrier, information and detailed data related to patients, orders, and results, and information related to specimen flow algorithms and automated decision making. 在这些系统之间，被传递的信息类型包括：过程控制、每一种设备或分析器的状态信息、每一个标本、标本容器、标本支架、与患者有关的信息和详细数据、医嘱、检验结果，和标本流程算法相关的信息及自动化。 This wide array of communicated information is essential for a Laboratory Automation System (LAS) to control the various processes and to ensure that each specimen or aliquot has the correct tests performed in the proper sequence. 这组庞大的信息对于实验室自动化系统（LAS）去控制不同的处理过程和确保每一个标本或分离物得以按照正确的顺序来进行正确的测试是必需的。

As of 1999 there are already more than 200 clinical laboratories in the world with “total laboratory automation” systems and hundreds more with a lesser level of automation – generally workcells or modular automation systems.到 1999 年，世界上已有 200 多个临床的实验室使用 "全实验室自动化"系统，而更多的实验室在使用自动化程度低一些的系统-通常被称做工作单元自动化系统。 The development of prospective standards for these aspects of clinical laboratory automation will facilitate the inter-operability of the systems being developed by the various players in lab automation – the vendors of analytical instruments, LIS systems, automation systems and components and their laboratory customers.关于临床实验室的自动化方面标准的发展将促进由不同的开发者开发的实验室自动化系统间的互用性。这些开发者包括：分析设备的供应商、LIS 系统、自动化系统、组件 和组件的实验室消费者。

In the early 1990’s an ad hoc task force, Clinical Testing Automation Standards Steering Committee (CTASSC), began to meet at the annual meetings of the International Conference on Automation and Robotics (ICAR) and the American Association for Clinical Chemistry (AACC). 90 年代初，临床检验自动化标准的指导委员会 (CTASSC)开始参加在国际自动化与机器人技术研讨会 (ICAR)和美国临床化学联合会(AACC)的年会。 In 1996, CTASSC approached NCCLS,[1] a globally-recognized, consensus standards or oganization that has developed more than 125 clinical laboratory standards and related products since it was founded in 1968, about taking on a project for clinical laboratory automation. 在 1996 年, CTASSC 与 NCCLS 就从事临床实验室项目进行接触。NCCLS 是一个全球知名的标准或组织，从 1968 年建立以来，它已发展

NCCLS, 940 West Valley Road, Suite 1400, Wayne, PA 19087; www.nccls.org

了 125 个以上的标准及相关产品。NCCLS agreed to sponsor this project which was separately funded via a direct solicitation of the vendors in lab automation, instruments, LIS systems, and automation customers. NCCLS 同意赞助这一由实验室自动化、设备、 LIS 系统的供应商和自动化消费者单独资助的项目。It was organized as a "fast track" project to develop prospective standards to guide future developments in laboratory automation. 这一被命名为 "快速轨道"的项目将开发预期的标准来指导未来实验室自动化发展。With the oversight of an Area Committee on Automation, five separate subcommittees have worked since 1997 to develop a series of prospective standards for: 在一个自动化区域委员会的领导下，五个独立的子委员会从 1997 开始工作并且为下列方面开发出一系列预期的标准：

- Specimen containers and carriers 标本容器和支架
- Bar codes for specimen container identification 为识别标本用的条形码
- Communications 通信
- System operational requirements and characteristics 系统操作的必要条件和特点
- Electromechanical interfaces 机电接口

Approved level standards for all five of these areas are expected to be published by NCCLS in calendar year 2000. 在这五方面经核准的标准希望在公元 2000 年由 NCCLS 出版

## 13.2.2 Introduction 介绍

This chapter specifies HL7 triggers, messages, and segments required for implementation of clinical laboratory automation communication interfaces.这一章介绍了实施临床实验室自动化联系接口所需的 HL7 的触发器，消息和段。 It was developed jointly by the HL7 Laboratory Automation Special Interest Group and the NCCLS Subcommittee on Communications with Automated Systems. 这是由 HL7 实验自动化特别兴趣小组与 NCCLS 通信和自动化系统子委员会共同开发的。 This chapter, by agreement between HL7 and NCCLS, is also published in its entirety as part of the NCCLS Approved Level standard:此章经由 HL7 与 NCCLS 同意，作为 NCCLS 已批准的部分标准出版：

- AUTO3, " Laboratory Automation: Communications with Automated Clinical Laboratory Systems, Instruments, Devices, and Information Systems, © NCCLS" [2] AUTO3，"实验室自动化：通信和自动临床实验室系统，工具，设备和信息系统间的通讯，© NCCLS" [3]

This document contains other chapters to enable a vendor to successfully implement all of the elements essential to meet the standard.. 这篇文档还包含其他章节来使供应商可以在所有元件的实现上符合此标准……

The other related NCCLS clinical laboratory automation standards are: **另一个与 NCCLS 临床实验室自动化标准有关的是：**

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(NCCLS. *Laboratory Automation: Communications With Automated Clinical Laboratory Systems, Instruments, Devices, and Information Systems*; Approved Standard - NCCLS Document AUTO3-A [ISBN 1-56238-361-2}. NCCLS, 940 West Valley Road, Suite 1400, Wayne, PA 19087-1898 USA, 2000). www.nccls.org

(NCCLS. *Laboratory Automation: Communications With Automated Clinical Laboratory Systems, Instruments, Devices, and Information Systems*; Approved Standard - NCCLS Document AUTO3-A [ISBN 1-56238-361-2}. NCCLS, 940 West Valley Road, Suite 1400, Wayne, PA 19087-1898 USA, 2000). www.nccls.org

- AUTO1: “Laboratory Automation: Specimen Container / Specimen Carrier”, © NCCLS. AUTO1：实验室自动化:标本容器 /标本支架© NCCLS。

- AUTO2: “Laboratory Automation: Bar Codes for Specimen Container Identification”, © NCCLS. AUTO2：实验室自动化: 标本容器识别条形码 © NCCLS。

- AUTO4: “Laboratory Automation: Systems Operational Requirements, Characteristics, and Information Elements”, © NCCLS. AUTO4：实验室自动化:系统操作的要求,特性,和信息元素, © NCCLS.

- AUTO5: “Laboratory Automation: Electromechanical Interfaces”, © NCCLS. AUTO5: 实验室自动化：机电接口, © NCCLS.

The reader is referred to any or all of these NCCLS standards, particularly AUTO3 and AUTO4, for detailed information on the communications requirements in clinical laboratory automation applications. 读者可参考任意或所有这些 NCCLS 标准,特别是 AUTO3 和 AUTO4 来取得详细的关于临床实验室自动化应用系统中通信要求的信息。

The control model proposed in this standard is an extension of the model described in LECIS: 在标准中提议的控制模型是 LECIS 中描述的模型的扩充。

- ASTM E1989-98. Laboratory Equipment Control Interface Specification (LECIS). American Society for Testing and Materials; 1998 ASTM E1989-98.实验室设备接口规范（LECIS），美国材料试验协会；1998

### 13.2.3 Glossary 词汇

The terminology found in ANSI X3.182-1990[4] shall be used where applicable. Other computer-related technical terms used in this document can be found in ASTM Terminology E 1013[5], IEEE 100[6], IEEE 610[7], and ANSI X3.172[8] 建立在 ANSI X3.182-1990[9] 上的术语学应当在适当的时候使用。本文中其他同计算机相关的术语建立在 ASTM 术语学 E 1013[10], IEEE 100[11], IEEE

ANSI Standard X3.182-1990. Bar Code Print Quality Guidelines. New York, NY: American National Standards Institute; 1995

ASTM E1013-93. Standard Terminology Relating to Computerized Systems. West Conshohocken, PA: American Society for Testing and Materials; 1993

IEEE 100. Dictionary of Electrical and Electronics Terms. Institute of Electrical and Electronics Engineers, Inc.; 1996

IEEE 610. Glossary of Computer Languages. Institute of Electrical and Electronics Engineers, Inc.; 1993

ANSI X3.172-1996. Information Technology – American National Standards Dictionary of Information Technology (ANSDIT). New York, NY: American National Standards Institute; 1996

ANSI Standard X3.182-1990. Bar Code Print Quality Guidelines. New York, NY: American National Standards Institute; 1995

ASTM E1013-93. Standard Terminology Relating to Computerized Systems. West Conshohocken, PA: American Society for Testing and Materials; 1993

610[12], 和 ANSI X3.172[13] 上。

### 13.2.3.0 Accession Identifier (also accession number): 添加标识符（也叫做添加号）

A numeric (or alphanumeric) identifier assigned by the LIS for a test order. Depending on the particular LIS a patient's test orders for a single encounter may use one or more accession identifiers and each accession identifier may encompass one or more tests and one or more specimens and/or specimen containers. However, accession identifiers are unique within each patient encounter. The Accession identifier may not be equal to the Placer or Filler Order Numbers, because of uniqueness requirement.. 添加标识符是由 LIS 分配的，表示检验医嘱的数字的（或数字和字母混排的）标识符。基于特定的 LIS，患者的开一次检验医嘱可能对应一个或多个添加标识符并且每个标识符可能对应一个或多个检验、标本或标本容器。但是，在每个患者的一组检验医嘱中，每个添加标识符都是唯一的。由于唯一性的需要，添加标识符的数量可能不等于医嘱的数量。

### 13.2.3.1 Additive: 添加剂

As used here, refers to a substance generally a chemical that has been added to a specimen collection tube or container to prevent degradation of one or more constituents of the specimen.指一种物质，通常是一种化学物质，当它被加入到标本容器中时，可防止标本中的成分退化。

### 13.2.3.2 Aliquot: 分离物：

1) ***In Quantitative Analysis,*** a sample comprising a known fraction or measured portion of the whole 在定量分析中, 是指包含已知部分或已测量部分的标本。

2) ***In NCCLS LAB AUTOMATION Standard documents,*** a portion of a specimen placed in a separate container to facilitate concurrent testing or to hold in reserve for future use 在 *NCCLS LAB 自动化标准文档*中, 是指被放置在分离器中的一部分标本，这些标本即可以被用于当前各项实验，也可以保留为以后使用。

**Notes:** a) The portion of the specimen is typically removed from the original specimen after initial processing, such as centrifugation, to obtain serum or plasma samples, and is considered to be chemically identical to all other subdivisions of an original sample of serum, plasma, urine, CSF, etc.; 标本中的一部分通过最初的处理后被从原标本中取出，如：离心分离物，可得到血浆和血清的样本，也可从原始的血浆、血清、尿、CSF 等标本中得到其他的成分。

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IEEE 100. Dictionary of Electrical and Electronics Terms. Institute of Electrical and Electronics Engineers, Inc.; 1996

IEEE 610. Glossary of Computer Languages. Institute of Electrical and Electronics Engineers, Inc.; 1993

ANSI X3.172-1996. Information Technology – American National Standards Dictionary of Information Technology (ANSDIT). New York, NY: American National Standards Institute; 1996

b) It may be necessary to identify the aliquot as an individual specimen distinct from the original specimen in a collection container labeled with a unique identifier that may be linked to or associated with the primary collection container. 将分离物作为不同于原标本的独立的样本是必要的。分离物将被放在一个具有唯一标识符的容器里，通过这一标识符可找到原标本容器。

### 13.2.3.3 Analyzer: 分析仪

An instrument and/or specimen processing and handling device that performs measurements on patient specimens of quantitative, clinically relevant analytes. 是指一种用于完成定量的、和临床相关的标本测定的工具或样品处理设备。

**Note:** A portion of a patient's specimen is consumed in the analytic process. 患者的部分标本在分析的过程中是有消耗的

### 13.2.3.4 Automated:自动化

A characterization applied when all analytical processes, including sample and reagent uptake, sample/reagent interaction, chemical/biological analysis, result calculation, and result readout are mechanized. 当所有的分析过程都是机械化时的一种描述。这些分析过程包括：样本和试剂的获得、样本和试剂的相互作用、化学的/生物的分析、结果的计算、结果的读出。

### 13.2.3.5 Automated instrument: 自动化设备

A laboratory instrument that may or may not be connected to a laboratory information system (LIS), hospital information system (HIS), and/or laboratory automation system (LAS), which performs measurements on a patient's sample;对患者样本进行测试的实验室设备，它可能和实验室信息系统（LIS）、医院信息系统（HIS）、实验室自动化系统（LAS）相连接，也可能未与这些系统相连接。

**Note:** These instruments may have specific hardware and/or software modifications that allow interface to a laboratory automation system. 如果连入实验室自动化系统，这些设备可能需要特殊的硬件/软件上的改造。

### 13.2.3.6 Automation system 自动化系统:

An automation system refers to a variety of possible systems that can include some of the following types: automated instruments, laboratory information systems (LIS), laboratory automation systems (LAS), hospital information systems (HIS), and front-end processing devices. 自动化系统可以包括以下这些类型：自动化设备，实验室信息系统（LIS），实验室自动化系统（LAS），医院信息系统（HIS）以及前处理设备。

### 13.2.3.7 Bar code 条形码:

An array of parallel rectangular bars and spaces that creates a symbology representing a number or alphanumeric identifier 条形码是一组由竖线条与线条间的空隙组成的平行线，是用来表示数字或字母标识符的.

### 13.2.3.8 Bar length 条码长:

The length of the bars in the bar code 在条形码中条码的长度.

### 13.2.3.9 Barrier 障碍物:

See **Separator** 参见隔离物

### 13.2.3.10 Barrier Delta: 障碍层：

Identifies the distance from the Point of Reference to the separator material (barrier) within the container. This distance may be provided by the LAS to the instrument and/or specimen processing/handling device to facilitate the insertion of a sampling probe into the specimen without touching the separator. See the Point of reference definition or in NCCLS standard AUTO5 *Laboratory Automation: Electromechanical Interfaces.* 是指从 XYZ 坐标系顶点到分隔物质（障碍物）的距离。这一距离由 LAS 提供给标本处理设备来帮助标本探针插入标本时不碰到分隔物。XYZ 坐标系顶点的定义参见 *NCCLS 标准 AUTO5 实验室自动化: 机电接口.*

### 13.2.3.11 Bottom of cap: 试管盖的底部

The farthest point from the top of the container/test tube that the cap reaches 试管盖从容器或试管的顶部所能达到的最远的点。

**Note:** This point may be inside the tube.注意：所取的点有可能是在容器内部

### 13.2.3.12 Bottom of container//Bottom of tube 容器底/试管底:

The portion of the container/test tube farthest from the cap (see **Point of reference**).这是指容器或试管中离盖最远的部分（参见 **Point of reference**）

### 13.2.3.13 Bottom of tube 试管底:

See **Bottom of container 见容器底**.

### 13.2.3.14 Carrier 支架:

See **Specimen carrier 见标本支架**.

### 13.2.3.15 Character 特性:

**1)** The smallest abstract element of a writing system or script.写系统或脚本时的最小最抽象的要素

**Note:** A character refers to an abstract idea rather than to a specific shape. 特性多指一种抽象的概念而非特殊的形状。

**2)** A code element.编码要素

### 13.2.3.16 Clinical laboratory automation 临床实验室自动化:

The integration of laboratory personnel and preanalytical, analytical, and postanalytical processes and information systems. 是指实验室人员、预分析、分析、分析后处理过程和信息系统的集成。

### 13.2.3.17 Clinical laboratory automation systems 临床实验室自动化系统:

An assemblage of components that mechanically and electronically transfers, analyzes, and processes information and material related to clinical diagnostic testing of patient specimens, controls, calibrators, standards, and images. 是指可以机械地和自动地传输、分析、处理标本的临床诊断检验、控制、校正名、标准品和图象相关的信息和材料的组件集合。

### 13.2.3.18 Closed-container sampling//Closed-tube sampling 密闭容器取样//密闭试管取样:

The action of aspirating a sample from a container/tube with the closure in place, requiring the sample probe to pierce the closure of the container/sample container.是指用取样针刺穿容器的密封处，然后从密闭的容器中吸出样本的动作。

### 13.2.3.19 Closed-tube sampling 密闭试管取样:

**See Closed-container sampling**.见密闭容器取样

### 13.2.3.20 Container//Tube//Test Tube: 容器/试管

See **Specimen container**.见标本容器

### 13.2.3.21 Container Identifier 容器标识符

A numeric (or alphanumeric) identifier provided by the LIS or LAS to uniquely identify each specimen container or aliquot container. The *NCCLS LAB AUTOMATION Standard* requires a unique identifier for each container introduced into the LAS or leaving the LAS. 由 LIS 或 LAS 提供的用来唯一标识每一个标本或分离物容器的一个数字的（数字与字母混排）的标识符。*NCCLS 实验室自动化标准*需要为每一个容器提供一个唯一的标识符以便传入或离开 LAS。

### 13.2.3.22 Cycle time components 循环时间组件:

The identified time segments of the process of moving from one sample to the next, including: presentation of specimen along transportation system to docking site at instrument; identification/recognition that the correct specimen is in place; either direct aspiration from specimen container by probe, or transfer of specimen container to instrument, aspiration, and return of specimen container to specimen carrier/transportation system; departure of completed specimen container; movement into position of next specimen container. 是指从一个标本移入下一个的过程的可识别的时间段，包括：标本沿着传送系统被送到仪器的入坞地点、识别/认识正确标本已放好、探针从标本容器中直接吸出样本、标本容器被传送到仪器，吸出、送还标本容器到标本传送系统、全部标本容器的起程、移入下一个标本容器的位置。

### 13.2.3.23 Decapping: 除盖：

The removal of a closure from a specimen container. 从标本容器上移去封闭物。

### 13.2.3.24 Delimiter: 分隔符

A symbol used to separate items in a list.一种用于分隔表格中的列的符号

### 13.2.3.25 Directions of the specimen, Transportation system, Instrument or Specimen processing and handling device interfaces: 标本、传送系统、工具或标本处理设备接口的方向：

The orthogonal axes. 直角的轴

| **Note:** | a) These axes are demonstrated in Figure 13-1. 这些轴在表 13-1 中有说明。 |
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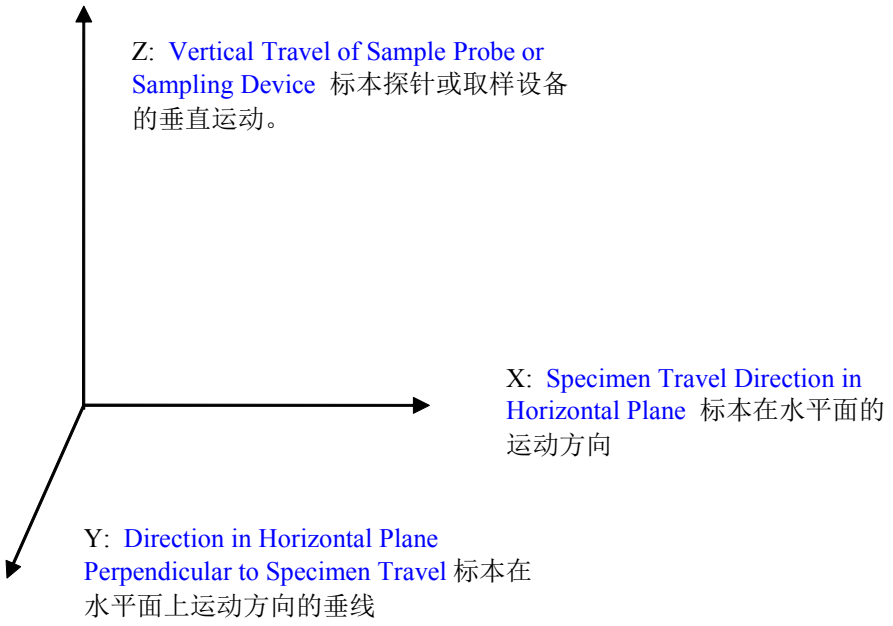
**Figure 13-1. Physical Frame of Reference in a Three-Dimensional Space (X-Y-Z)**

**表 13-1. 三维参照系（X-Y-Z）**




- X–direction, *n* - The direction that a specimen travels along a transportation system. X 方向-，n - 标本沿着传送系统运动的方向

| **Note**: | b) Specimens would move along the X dimension as, for example, in transportation from station to station in a laboratory (See Figure 13-2.) 标本将会沿着 X 方向移动，如：在实验室内从一个站到另一个站的传送（参见图 13-2）。 |
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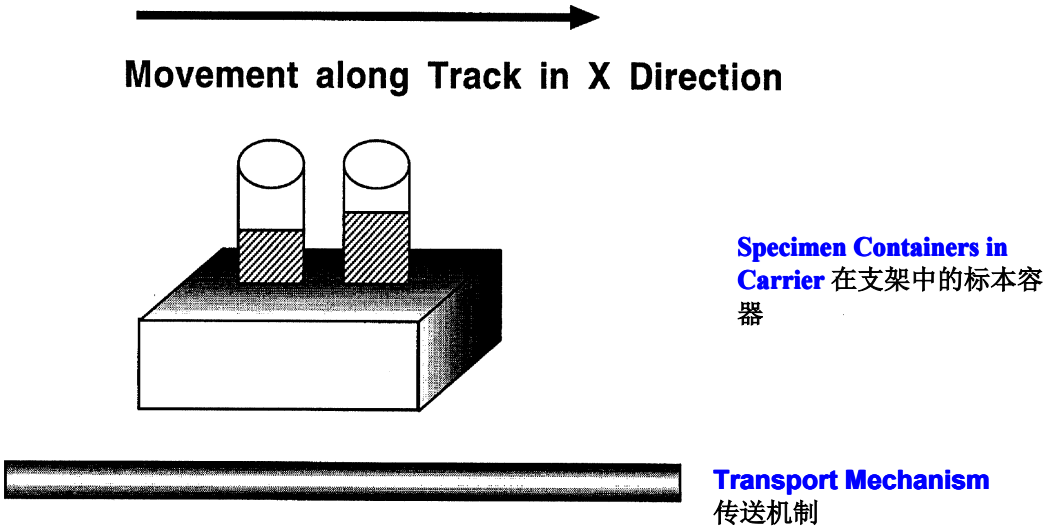
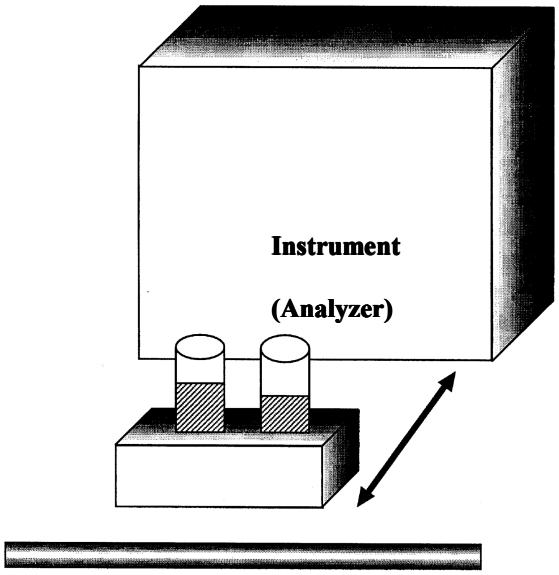



**Figure 13-2. X Direction**

**图 13-2. X 方向**

- Y–direction, *n* - The horizontal direction perpendicular to specimen travel along a transportation system; Y-方向，n-标本沿着传送系统运动的水平方向上的垂线

| **Note:** | c) Specimens could move in the Y dimension away from a transport system to be placed onto an instrument for analysis (see Figure 13-3). The sample probe would move in the Y dimension as it moves out from the instrument or specimen processing and handling device to a position directly over the specimen container. 标本在远离传送系统的 Y 方向上运动，被放置在设备上进行分析（参见图 13-3）。当标本探针从设备/标本处理设备上移到标本容器正上方时，她是沿着 Y 方向移动的。 |
|---|---|




**Movement of specimen to instrument or of probe from instrument to specimen** 标本到设备上或标本探针从设备到标本的移动。

**(Y direction)**（Y 方向）

**Figure 13-3. Y Direction**

**图 13-3 Y 方向**

Z–direction, *n* - The vertical dimension; Z-方向，n – 垂直方向

**Notes:** d) Specimens could be lifted in the Z dimension off a transport system for transfer between locations; 标本能沿着 Z 方向被提升，离开传送系统，来实现两个位置间的移动。

e) The center line of a container should be controlled, so it is in the Z dimension; a specimen centering device would be referenced to the Z dimension; a sample probe would follow the Z dimension as it moves downward into a specimen container to aspirate serum, blood, etc. for analysis (see Figure 13-4); 容器的中线应被控制在 Z 方向；应有一个标本中心定位设备指向 Z 方向；标本探针可沿着 Z 方向移入标本容器中来吸出血清、血液等以被分析之用。

f) Rotation about the Z dimension may be used to locate and read the bar-code label on a specimen container or to assess the quality of a specimen in terms of turbidity, hemolysis, icterus, etc. Z 方向上的旋转可被用来定位和读取标本容器上的条码标签或按照混浊、溶血、黄疸等来评估标本的质量。

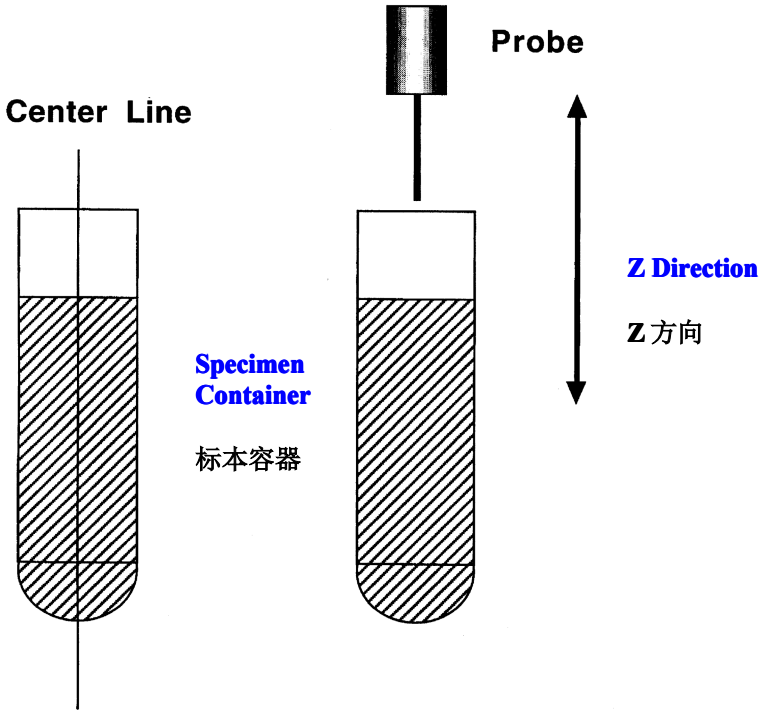



**Figure 13-4. Z Direction**

**图 13-4. Z 方向**

13.2.3.26 Directions of the sample, Transportation system, Instrument or Specimen processing handling device and interfaces 样本、传送系统、工具或标本处理设备接口的方向：

See **Directions of the specimen**, etc. 参见**标本的方向**

13.2.3.27 Direct track sampling: 直接轨迹取样：

The process in which aspiration of a sample occurs directly from the specimen container while it is on the transportation system, whereby the instrument probe extends to reach the specimen container on the transportation system; 是指直接从在传送系统上的标本容器中取样的过程，探针伸入到仍在传送系统上的容器中。

**Note:** This process requires agreement between the transportation system and the instrument and specimen processing and handling devices regarding point of reference (POR) to guide movement of the probe to the specimen. 这一过程需要在传送系统和工具/标本处理设备之间就指定点的 (POR)问题达成一致来指导探针到标本的运动。

13.2.3.28 Docking site: 入坞地点：

**1)** The location of the physical interface between two components of a system; 系统两组件间的物理接口位置

2) **In *NCCLS LAB AUTOMATION Standard documents,*** the interface between the transportation system and the instrument and/or the specimen processing and handling devices where the specimen container arrives for sampling to occur. 在 ***NCCLS 实验室自动化标准文件*** 中，传送系统和工具/标本处理设备之间的接口，标本被送到此接口来进行取样。

### 13.2.3.29 Flection: 弯曲部：

The point at which the vertical (straight) walls of the specimen container bend to form the base. 是指标本容器由垂直的壁进而弯曲成底座的那一点。

### 13.2.3.30 Interaction: 相互作用：

A standard exchange of messages between two instances of equipment that synchronizes the execution of one or more commands. State models are used describe the standard interactions. 是指使在两个消息实例中同步一个或多个命令的执行的消息的标准交换。

### 13.2.3.31 Label: 标签：

1) The display of written, printed, or graphic matter upon the immediate container of any article; 在任何物品的容器中的手写的、打印的、或图形的文本的显示。

2) **In *NCCLS LAB AUTOMATION Standard documents***, the paper and attached adhesive coating on which the bar code and other human readable information is printed.在 ***NCCLS 实验室自动化标准文件*** 中，是指具有条码或人类可读出信息的纸或粘性的覆盖物。

### 13.2.3.32 Laboratory automation system (LAS): 实验室自动化系统（LAS）：

A system of information and hardware technology that allows the operation of the clinical laboratory process without significant operator intervention; 是指可实现不需要太多人工干预的临床实验室处理过程的信息和硬件技术的系统。

| | |
|---|---|
| **Note:** | Typical functionality includes information system control of the instruments through direct LAS interfacing, including any technology that manipulates the specimen (i.e., centrifuge); transportation of the specimen; result evaluation, repeat testing, reflex testing; and quality assessment and results reporting. 典型的功能包括具有 LAS 接口的设备的信息系统控制、巧妙处理标本的技术（如：离心分离机）、标本传送系统、结果评估、重复检测、反作用检测、质量评估和结果报告系统。 |

### 13.2.3.33 Laboratory equipment control interface specification (LECIS): 实验室设备控制接口规范（LECIS）：

A high-level protocol that defines message content for standard behaviors or interactions for remote control of analytical instruments and devices (ASTM E 1989-98[10]). 是一种高层协议，指一种定义了分析设备远程控制的标准行为或相互作用的消息的具体内容。

### 13.2.3.34 Laboratory information system (LIS): 实验室信息系统（LIS）：

The information system that is responsible for management of data regarding patient specimen identification, tests requested, results reported, quality control testing, and other aspects of sample

analysis; 是指对同患者标本识别、检验申请、结果报告、质量控制和样本分析的各个方面相关的数据进行管理的信息系统。

**Notes:** a) The LIS interfaces directly with the LAS to communicate patient, visit, container, test orders, specimen status, and results about specific testing to be done LIS 和 LAS 接口使下面的几方面间可进行信息交流：患者、访问、容器、检验医嘱、标本状态和特殊检查的结果。

b) Instrument or specimen processing and handling devices may be interfaced with the LIS or the LAS to direct specific testing and to retrieve results for reporting; 工具/标本处理设备可和 LIS 和 LAS 进行接口来指导检验及取得报告结果。

c) The LIS is frequently also interfaced to a clinical information system for use by physicians and other medical personnel. LIS 与临床信息系统相连以便医生和其他医疗人员使用。

### 13.2.3.35 LECIS:

Acronym for Laboratory Equipment Control Interface Specification, (ASTM E 1989-98[10]). 实验室设备控制接口协议的缩写（ASTM E 1989-98[10]）。

### 13.2.3.36 Location: 位置：

A physical place within the laboratory, with a unique identifier (e.g., refrigerator shelf number, instrument buffer ID, track identifier). 实验室中具有唯一标识符的物理位置：冰箱隔板号、设备缓冲器 ID，轨迹标识符等）。

### 13.2.3.37 Open-container sampling//Open-tube sampling: 开放容器取样/开放试管取样：

The action of aspirating a sample from a specimen container from which the closure has previously been removed; 从一个已开封的标本容器中吸出样本的动作。

**Note:** The sample probe contacts the surface of the specimen without other physical barriers. 标本探针无阻碍地接触到样本的表层。

### 13.2.3.38 Open-tube sampling: 开放试管取样：

See **Open-container sampling**. 参见开放容器取样。

### 13.2.3.39 Pitch: 倾斜度：

The center distance between two specimen containers in a carrier or between two sequential specimen container carriers. 一个支架中的两个标本容器间或两个相连的标本容器支架的中心距离

### 13.2.3.40 Point of reference//Point in space, (POR): 参照点（POR）：

The intersection of the xy plane and an infinite line in the ‘z’ direction. XYZ 坐标系中三条线的交点。

**Note:** The POR is the reference from which all positioning and alignment of specimen containers are measured. POR 是一个所有标本容器的位置和队列都可被测量的参照系。

### 13.2.3.41 Process instruments: 处理设备：

***In NCCLS LAB AUTOMATION Standard documents,*** components of an automated laboratory comprising the automated devices that perform a multitude of pre- and postanalytical tasks, and perform nonanalytical tasks on specimens, containers, carriers, and similar processes. 在 ***NCCLS 实验室自动化标准文件***中，一个自动化实验室的组件中包含对标本容器或支架执行大多数预分析、后分析和非分析工作的设备。

### 13.2.3.42 Quiet zone: 静止域：

***In NCCLS LAB AUTOMATION documents,*** the white {blank} space on a bar code immediately preceding the first bar and immediately following the last bar. 在 ***NCCLS 实验室自动化标准文件***中，是指在条码中第一个条之前和最后一个条之后的空白部分。

### 13.2.3.43 Recap: 重新加盖：

To replace the closure on a specimen container; either with the original closure or with a new replacement closure. 使用原密闭器或新的替代密闭器替换标本容器上的密闭器。

### 13.2.3.44 Robotic arm: 自动机械臂：

A device capable of moving a specimen container, specimen carrier, or another object in the X, Y, and Z directions; 可在 X、Y、Z 三个方向上移动标本容器、标本支架或其他物体的装置。

**Note:** Unless this device is an integral part of the LAS system, it is considered an instrument for the purpose of this proposed standard. 除非这个装置是 LAS 系统整体的的一部分，它被认为是为了标准设置的工具。

### 13.2.3.45 Sample//(Specimen): 样本/标本：

**1)** A small part of anything ... intended to show the quality, style, or nature of the whole; 任何物体的一小部分…倾向于显示质量、形式、或整体的实质；

**2)** ***In NCCLS LAB AUTOMATION Standard documents,*** a portion or aliquot withdrawn from a container for the actual test; 在 ***NCCLS 实验室自动化标准文件***中，为了实际检测从容器中提取的部分或分离物。

**Notes:** ***In NCCLS LAB AUTOMATION Standard documents,***

***NCCLS 实验室自动化标准文件***中，

a) samples are typically not placed in containers that will have to be uniquely identified, but may go directly into the instrument or specimen processing and handling device test stream or may be placed in sample cups unique to the instrument or specimen processing and handling device; 标本有时不被放入具有唯一标识的容器，而是被直接进入处理流程或被放入与处理设备唯一对应的标本杯中。

b) the ID of the specimen is typically assured by computer linkage of the pipetting or aspiration step to the ID of the container from which it was obtained, or by a separate numbering system for the sample cups that is internal to the analytical instrument or specimen processing and handling device. 标本 ID 由计算机从吸出此标本的容器的 ID 或在标本处理设备内部的样本杯编号来确定。

### 13.2.3.46 Sample carrier: 样本支架：

See **Specimen carrier**. 参见标本支架。

### 13.2.3.47 Sample container: 样本容器：

See **Specimen collection container**. 参见标本容器。

### 13.2.3.48 Sample-positioning system: 样本定位系统：

See **Specimen-positioning system**. 参见标本定位系统：

### 13.2.3.49 Sample probe: 样本探针：

See Specimen probe. 标本探针：

### 13.2.3.50 Separator: 分离物：

A material such as a gel which is contained in blood collection tubes to facilitate separation of blood cells from blood serum by creating a physical "barrier" between them. 是指一种在血液试管中存在的，可通过在血细胞和血清中建立物理的障碍以促进血细胞从血清中分离出来的一种物质，如：凝胶体。

### 13.2.3.51 Serum/Plasma Separator: 血清/血浆分离物

See **Separator. 参见**分离物。

### 13.2.3.52 Service envelope: 维修空间：

***In NCCLS LAB AUTOMATION Standard documents,*** the space around the transportation system and instruments that may be accessed periodically for maintenance or repair of equipment; 在 ***NCCLS 实验室自动化标准文件***中，可定期地用于设备修理的传送系统周围的空地。

**Note:** A transportation system and analytic instruments should not have mutually impinging service envelopes. 传送系统和分析设备不应有互相防碍的服务台。

### 13.2.3.53 Specimen: 标本：

The discrete portion of a body fluid or tissue taken for examination, study, or analysis of one or more quantities or characteristics, to determine the character of the whole. 为了检验、学习、或分析一种或多种特性从体液或人体组织中获取的不连续的部分，通过这一部分，我们可得到整体的特性。

> **Note:** The substance may still be referred to as a specimen if it has been processed from the obtained specimen; thus, examples of specimens include whole blood and serum or plasma prepared from whole blood; saliva; cerebrospinal fluid; feces; urine; fingernail clippings; hair clippings; tissue samples, even if embedded in a paraffin block; etc. 被处理过的标本中的物质仍被看作标本；因此，标本的例子包括：全血和从全血中得到的血浆或血清、唾液、脑脊髓液、粪便、尿、剪下的指甲、剪下的头发、甚至是石蜡中的组织样本等。

### 13.2.3.54 Specimen carrier//Sample carrier//Carrier: 标本支架/样本支架/支架

A device that holds the specimen container; 装载标本容器的设备。

> **Note:** The specimen carrier interfaces mechanically with the transportation system to move the specimen from location to location, and may carry one specimen container or many specimen containers. (See Figure 13-5). 标本支架和传送系统之间有机械的接口来将标本从一个位置移动到另一个位置，标本支架上可装载一个或多个标本容器。（参见 13-5 表）

### 13.2.3.55 Specimen collection container//Specimen container//Sample container//Container: 标本采集容器/标本容器/样本容器/容器

The tube that holds a patient specimen; 装载患者标本的试管。

> **Note:** The container typically consists of a glass or plastic closed-end tube with a removable closure on the opposite end. (See Figure 13-5) 容器通常是有玻璃或可移开的密闭口的密闭塑料容器。（参见 13-5 表）

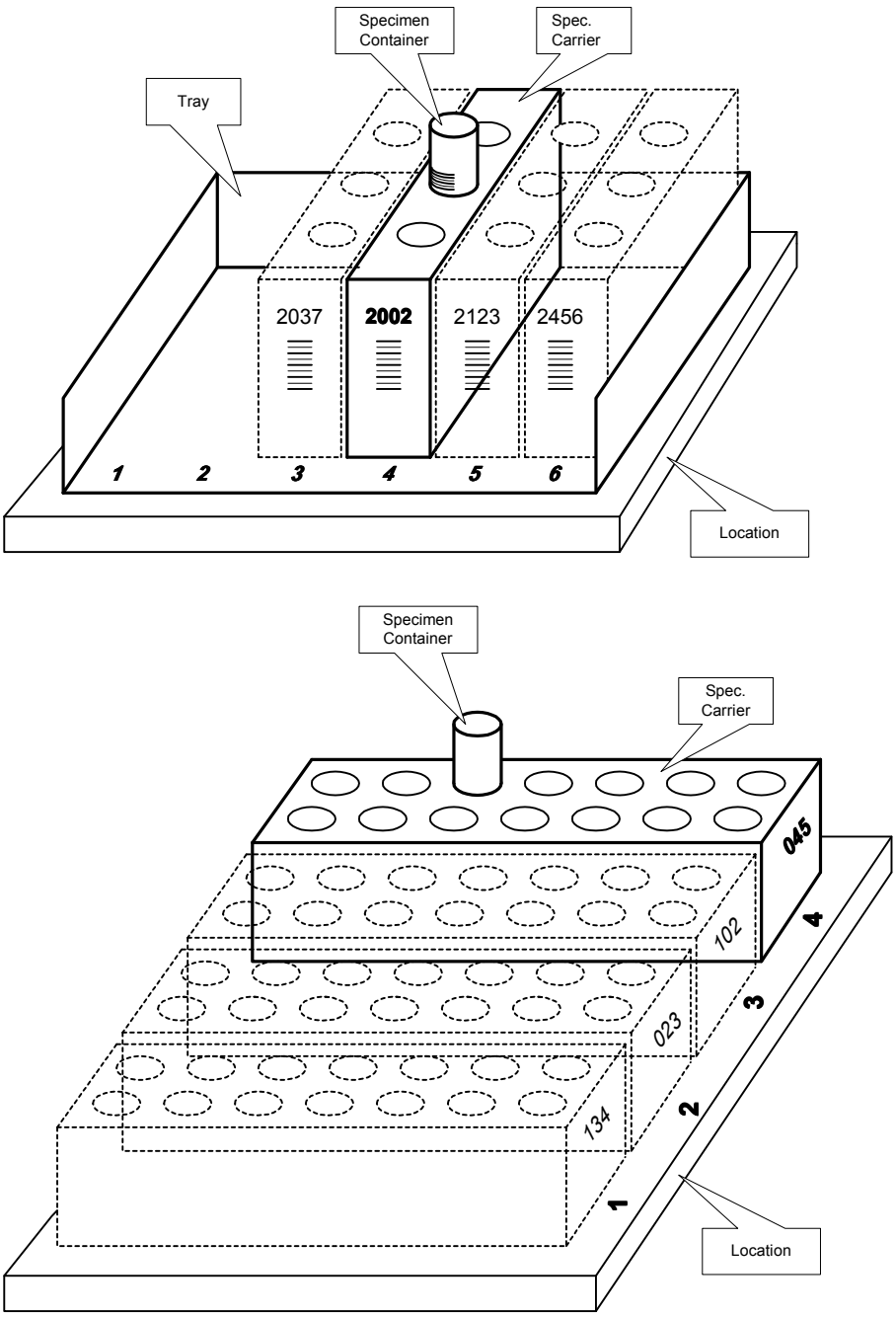



**Figure 13-5: Relationship Among Specimen Container, Specimen Carrier, Tray, and Locations.**

**图 13-5: 标本容器、标本支架、底托、位置之间的关系**

### 13.2.3.56 Specimen-positioning system//Sample-positioning system (SPS): 标本定位系统/样本定位系统（SPS）：

A device to position a specimen container within acceptable tolerances of a POR. 在 POR 可接受偏差范围内定位标本容器的设备。

### 13.2.3.57 Specimen probe//Sample probe: 标本探针/样本探针：

A part of an instrument or specimen processing and handling device that aspirates fluid from a specimen and delivers it to the instrument for analysis. 从标本中吸出液体并且把它传送到设备以被分析的工具/标本处理设备的一部分。

**Note:** The sample probe can also be called sample proboscis, nozzle, needle, or sampling mechanism. 标本探针还可称做标本鼻子、管口、针或取样机械。

### 13.2.3.58 Stay clear zone: 清洁区：

***In NCCLS LAB AUTOMATION Standard documents,*** the area between the instrument or specimen processing and handling device and the automation hardware that must remain clear of any physical device, ensuring that there is adequate access by the user or service person to either system. 在 ***NCCLS 实验室自动化标准文件***中，在 ***NCCLS 实验室自动化标准文件***中，在工具/标本处理设备和保持设备清洁的自动控制设备之间的区域，这一区域保证了用户或服务人员对于两系统中的任何一个都有足够的通路。

### 13.2.3.59 Symbol: 符号：

***In NCCLS LAB AUTOMATION Standard documents,*** a combination of bar-code characters, including start/stop characters, quiet zones, data elements, and check characters which form a complete scanning entity. 在 ***NCCLS 实验室自动化标准文件***中，是指条码符的集合，包括开始/结束符、静止域、数据元素和构成完整实体的检测位。

### 13.2.3.60 Test mnemonics: 检测记忆符：

Short, understandable contractions for test names. 检验名称的简短的、可理解的缩写。

### 13.2.3.61 Top of container//Top of tube: 容器/试管的顶部：

The open end of the container/test tube, closest to the cap. 容器/试管开放的一端，它最接近盖。

### 13.2.3.62 Top of tube: 试管顶部：

See **Top of container**. 参见容器顶部

### 13.2.3.63 Tray: 底托：

A holder for one or more carriers (optional). (See Figure 13-5). 一个或多个标本支架的托儿（可选择）。（参见图 13-5）

### 13.2.3.64 X–direction: X-方向：

See **Directions**. 参见方向。

### 13.2.3.65 Y–direction: Y-方向

See **Directions**.参见方向。

#### 13.2.3.66 Z–direction: Z-方向

See **Directions**.参见方向。

## 13.3 TRIGGER EVENTS AND MESSAGE DEFINITIONS 触发器事件和消息定义

Each trigger event is listed below, along with the application form of the message exchange. The notation used to describe the sequence, optionality and repetition of segments is described in Chapter 2. 每一个触发器事件和相关的消息交换形式将会在下面进行说明。描述段的结果、选择性和可重复性的的符号在第 2 章中有说明。

The notation used to describe the sequence, the optionality, and the repetition of segments is described in HL7, Chapter 2, under "Format for Defining Abstract Message." 在 HL7 中描述段的结果、选择性和可重复性的的符号在第 2 章的“摘要消息的格式”节中有说明。

All the ACK messages are varieties of the 'general acknowledgement' message defined in Chapter 2, Section 2.14.1. The only difference is the event code. 所有的 ACK 消息是在第 2 章，第 2.14.1 节中讲述的的“通用确认“消息的变种。唯一的区别是事件码不同。

The "Equipment Notification" message (EAN/ACK event U09) is used to send information about the occurrence of an event. An event does not necessarily cause a state transition. The "Status Update" message (EAU/ACK event U01) is used to transfer information about the current status. This status can be the result of one or more events that led to the state transition. Example: The event of a "warning level of a consumable being reached" (e.g., 10% left) does not cause a state transition, because the system can remain "In operation". This results in an EAN/ACK message. An event "container transport jammed" causes the state transition to "Emergency stop". This results in both EAN/ACK and EAU/ACK messages. “设备通告“消息（EAN/ACK 事件 U09）被用来发送事件出现的消息。事件不是引起情况变化的必要的起因。”状态更新“消息（EAU/ACK 事件 U01）被用来传送当前状态信息。这一状态可能是导致情况变化的一个或多个事件的结果。例：事件“消费品的报警线”（如：剩下 10%）不可能引起情况的变化是因为系统可保持运行。这会产生一个 EAN/ACK 消息。事件“容器传送器过满”可引起情况转变到“紧急停止”。这会产生 EAN/ACK 和 EAU/ACK 消息。

For the transfer of laboratory automation orders and results refer to *4.4.6 OML - laboratory order message (event O21)* instead of ORM and *7.3.2 OUL – unsolicited laboratory observation message (event O20)* instead of ORU.实验室自动化命令的传递和结果中用 *4.4.6 OML 实验室命令消息(event O21)*代替 ORM，用 *7.3.2 OUL – 主动实验室观察消息 (event O20)* 代替 ORU.

### 13.3.1 ESU/ACK - automated equipment status update (event U01) ESU/ACK – 自动设备状态更新(event U01)

### 13.3.2

This message is used to send information about the status of a device or equipment from one application to another (e.g., automated device to a Laboratory Automation System). The status update can be sent unsolicited or as a response to the trigger "Automated Equipment Status Request." 这一消息是用来从一个应用程序向另外发送状态更新信息的（如：从自动化设备到实验室自动化系统）。状态更新可被主动地发送，也可作为触发器“自动设备状态请求”的响应。

| ESU^U01^ESU_U01 | Equipment Status Message 设备状况消息 | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| EQU | Equipment Detail 设备细节 | 13 |
| [ { ISD } ] | Interaction Status Detail 相互作用状态细节 | 13 |
| [ ROL ] | Role Detail 角色细节 | 12 |

| ACK^U01^ACK | General Acknowledgement 一般认识 | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| MSA | Message Acknowledgment 消息认识 | 2 |
| [ ERR ] | Error14 错误 | 2 |

### 13.3.3 ESR/ACK - automated equipment status request (event U02) ESR/ACK –自动设备状态请求(event U02)

This message is used to request information about a device's or piece of equipment's status from one application to another (e.g., Laboratory Automation System to automated equipment). The equipment identified in the EQU segment should respond with its status using the "Automated Equipment Status Update." 这一消息是一个应用程序用来向另外一个要求得到设备的或设备的一部分的状态信息的。（如：从实验室自动化系统到自动化设备）。在 EQU 段中确定的设备应该使用“自动设备状态更新”来回答它的状态。

| ESR^U02^ESR_U02 | Equipment Status Message 设备状况消息 | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| EQU | Equipment Detail 设备细节 | 13 |
| [ ROL ] | Role Detail 角色细节 | 12 |

| ACK^U02^ACK | General Acknowledgment | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| MSA | Message Acknowledgment 消息认识 | 2 |
| [ ERR ] | Error 错误 | 2 |

### 13.3.4 SSU/ACK - specimen status update (event U03) SSU/ACK – 标本状态更新(event U03)

This message is used to send information concerning the location and status of specimens from one application to another (e.g., automated equipment to a Laboratory Automation System). 这一消息是用来从一个应用程序向另外一个发送关于标本的状态和位置信息的（如：从自动化设备到实验室自动化系统）。

The OBX segments attached to the SAC should be used for transfer of information not included in the SAC segment. 附于 SAC 的 OBX 段应该用于传送不包括在 SAC 段中的信息。

| SSU^U03^SSU_U03 | Specimen Status Message | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| EQU | Equipment Detail 设备细节 | 13 |
| { SAC | Specimen and Container Detail 标本和容器细节 | 13 |
| [ OBX ] | Observation Result 观察结果 | 7 |
| } | | |
| [ ROL ] | Role Detail 角色细节 | 12 |

This error segment indicates the fields that caused a transaction to be rejected.

| ACK^U03^ACK | General Acknowledgment | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| MSA | Message Acknowledgment 消息认识 | 2 |
| [ ERR ] | Error 错误 | 2 |

### 13.3.5 SSR/ACK - specimen status request (event U04) SSR/ACK – 标本状态请求 (event U04)

This message is used to request information concerning the location and status of specimens from one application to another (e.g., Laboratory Automation System to automated equipment). The request can be addressed for a specific container, a specific carrier, a specific tray or a specific location, depending on the arguments set in the SAC segment. The equipment specified in the EQU segment should respond with the "Specimen Status Update." 这一消息是一个应用程序用来向另外一个要求得到标本的状态和位置信息的。（如：从实验室自动化系统到自动化设备）。基于在 SAC 段中设置的参数，这一请求可针对特定的容器、支架、底托和位置。在 EQU 中指定的设备应使用“标本状态更新”来回答。

| SSR^U04^SSR_U04 | Specimen Status Message | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| EQU | Equipment Detail 设备细节 | 13 |
| { SAC } | Specimen and Container Detail 标本和容器细节 | 13 |
| [ ROL ] | Role Detail 角色细节 | 12 |

| ACK^U04^ACK | General Acknowledgment | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| MSA | Message Acknowledgment 消息认识 | 2 |
| [ ERR ] | Error 错误 | 2 |

### 13.3.6 INU/ACK – automated equipment inventory update (event U05) INU/ACK – 自动设备清单更新 (event U05)

This message is used to send information about inventory items from one application to another (e.g., automated Equipment to a Laboratory Automation System). 这一消息是用来从一个应用程序向另一个发送清单项目信息的 （如：从自动化设备到实验室自动化系统）。

| INU^U05^INU_U05 | Inventory Update Message | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| EQU | Equipment Detail 设备细节 | 13 |
| { INV } | Inventory Detail 总量细节 | 13 |
| [ ROL ] | Role Detail 角色细节 | 12 |

| ACK^U05^ACK | General Acknowledgment | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| MSA | Message Acknowledgment 消息认识 | 2 |
| [ ERR ] | Error 错误 | 2 |

### 13.3.7 INR/ACK – automated equipment inventory request (event U06) INR/ACK – 自动设备清单请求(event U06)

This message is used to request information about inventory items from one application to another (e.g., Laboratory Automation System to automated equipment). The equipment specified in the EQU segment should respond with the information about inventory item requested in the INV segment (or all items). 这一消息是一个应用程序用来向另外一个要求得到清单项目信息的。（如：从实验室自动化系统到自动化设备）。EQU 段中定义的设备应该回答在 INV 段中要求的所有清单项目信息。

| INR^U06^INR_U06 | Inventory Request Message | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| EQU | Equipment Detail 设备细节 | 13 |
| { INV } | Inventory Detail 总量细节 | 13 |
| [ ROL ] | Role Detail 角色细节 | 12 |

| ACK^U06^ACK | General Acknowledgment | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| MSA | Message Acknowledgment 消息认识 | 2 |
| [ ERR ] | Error 错误 | 2 |

### 13.3.8 EAC/ACK – automated equipment command (event U07) EAC/ACK – 自动设备命令 (event U07)

This message is used to send equipment commands from one application to another (e.g., a Laboratory Automation System to an automated Equipment). 这一消息是用来从一个应用程序向另一个发送设备命令的 （如：从实验室自动化系统到自动化设备）。

| EAC^U07^EAC_U07 | Equipment Command Message | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| EQU | Equipment Detail 设备细节 | 13 |
| { ECD } | Equipment Command Detail | 13 |
| [ SAC ] | Specimen and Container Detail 标本和容器细节 | 13 |
| [ CNS ] | Clear Notification 清晰的通知 | 13 |
| [ ROL ] | Role Detail 角色细节 | 12 |

| ACK^U07^ACK | General Acknowledgment | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| MSA | Message Acknowledgment 消息认识 | 2 |
| [ ERR ] | Error 错误 | 2 |

### 13.3.9 EAR/ACK – automated equipment response (event U08) EAR/ACK – 自动设备响应 (event U08)

This message is used to send equipment responses to previously issued commands from one application to another (e.g., automated Equipment to a Laboratory Automation System). 这一消息是一个应用程序用来向另外一个发出命令的程序发送设备响应信息的。（如：从自动化设备实到验室自动化系统）。

| EAR^U08^EAR_U08 | Equipment Command Message | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| EQU | Equipment Detail 设备细节 | 13 |
| { ECD | Equipment Command Detail 设备支配细节 | 13 |
| [ SAC ] | Specimen and Container Detail 标本和容器细节 | 13 |
| ECR } | Equipment Command Response 设备支配回应 | 13 |
| [ ROL ] | Role Detail 角色细节 | 12 |

| ACK^U08^ACK | General Acknowledgment | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| MSA | Message Acknowledgment 消息认识 | 2 |
| [ ERR ] | Error 错误 | 2 |

### 13.3.10 EAN/ACK - automated equipment notification (event U09) EAN/ACK – 自动设备公告 (event U09)

This message is used to send equipment notifications from one application to another (e.g., alerts sent by automated equipment to a Laboratory Automation System). 这一消息是用来从一个应用程序向另一个发送设备公告的（如：从自动化设备发送一个警告到实验室自动化系统中）。

| EAN^U09^EAN_U09 | Equipment Status Message 设备状况消息 | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| EQU | Equipment Detail 设备细节 | 13 |
| { NDS | Notification Detail 通知细节 | 13 |
| [ NTE ] | Notification Note 通知注释 | 2 |
| } | | |
| [ ROL ] | Role Detail 角色细节 | 12 |

| ACK^U09^ACK | General Acknowledgment | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| MSA | Message Acknowledgment 消息认识 | 2 |
| [ ERR ] | Error 错误 | 2 |

## 13.3.11 TCU/ACK - automated equipment test code settings update (event U10) TCU/ACK – 自动设备测试码设置更新 (event U10)

This message is used to send information concerning test codes and parameters from one application to another (e.g., automated equipment to a Laboratory Automation System). This message transfers the current snapshot of the test parameters of the sending system. The sent parameter sets are supposed to replace the parameter sets existing at the receiver of this message before the trigger (there is no selective “Add” or “Delete”). 这一消息是用来从一个应用程序向另一个发送与测试码和参数的（如：从自动化设备到实验室自动化系统）。这一消息传送的是发送系统测试参数当前的快照。被发送的参数是用来替换消息的接受者在被触发前的参数的（这里没有选择性的“增加”或“删除”）。

| TCU^U10^TCU_U10 | Test Code Settings Update | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| EQU | Equipment Detail 设备细节 | 13 |
| { TCC } | Test Code Configuration 检验码结构 | 13 |
| [ ROL ] | Role Detail 角色细节 | 12 |

| ACK^U10^ACK | General Acknowledgment | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| MSA | Message Acknowledgment 消息认识 | 2 |
| [ ERR ] | Error 错误 | 2 |

## 13.3.12 TCR/ACK - automated equipment test code settings request (event U11) TCR/ACK – 自动设备检测码设置请求 (event U11)

This message is used to request information concerning test codes from one application to another (e.g., Laboratory Automation System to automated equipment). 这一消息是用来从一个应用程序向另一个请求测试码信息的（如：从实验室自动化系统到自动化设备）。

| TCR^U11^TCU_U10 | Test Code Settings Request | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| EQU | Equipment Detail 设备细节 | 13 |
| { TCC } | Test Code Configuration 检验码结构 | 13 |
| [ ROL ] | Role Detail 角色细节 | 12 |

| ACK^U11^ACK | General Acknowledgment | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| MSA | Message Acknowledgment 消息认识 | 2 |
| [ ERR ] | Error 错误 | 2 |

### 13.3.13 LSU/ACK - automated equipment log/service update (event U12) LSU/ACK – 自动设备日志/服务更新 (event U12)

This message is used to send log and/or service events from one application to another (e.g., automated equipment to Laboratory Automation System). 这一消息是用来从一个应用程序向另一个日志/服务事件的（如：从自动化设备到实验室自动化系统）。

| LSU^U12^LSU_U12 | Equipment Log/Service Message | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| EQU | Equipment Detail 设备细节 | 13 |
| { EQP } | Equipment Log/Service 设备日志文件/服务 | 13 |
| [ ROL ] | Role Detail 角色细节 | 12 |

| ACK^U12^ACK | General Acknowledgment | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| MSA | Message Acknowledgment 消息认识 | 2 |
| [ ERR ] | Error 错误 | 2 |

### 13.3.14 LSR/ACK - automated equipment log/service request (event U13) LSR/ACK – 自动设备日志/服务请求 (event U13)

This message is used to request log and/or service events from one application to another (e.g., Laboratory Automation System to automated equipment). 这一消息是用来从一个应用程序向另一个请求日志/服务事件的（如：从实验室自动化系统到自动化设备）。

| LSR^U13^LSU_U12 | Equipment Log/Service Message | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| EQU | Equipment Detail 设备细节 | 13 |
| { EQP } | Equipment Log/Service 设备日志文件/服务 | 13 |
| [ ROL ] | Role Detail 角色细节 | 12 |

| ACK^U13^ACK | General Acknowledgment | Chapter |
|---|---|---|
| MSH | Message Header 消息头 | 2 |
| MSA | Message Acknowledgment 消息认识 | 2 |
| [ ERR ] | Error 错误 | 2 |

## 13.4 MESSAGE SEGMENTS 消息段

The following section identifies the message segments proposed for incorporation in this standard, and will be submitted for incorporation or reference in other HL7 and NCCLS standard documents. Valid entries are presented in an Attribute Table for each segment. 下面的章节定义了此标准中的消息段，这些定义在其他的 HL7 和 NCCLS 标准文件中也会被沿用。每一个段的属性表中将列出合法的入口。

### 13.4.1 EQU - equipment detail segment EQU – 设备细节片

The equipment detail segment contains the data necessary to identify and maintain the equipment that is being used throughout the Laboratory Automation System. 设备细节片包含了在实验室自动化系统中用到的确定和维护一个设备所必需的信息。

HL7 Attribute Table – EQU – Equipment Detail

HL7 属性表 – EQU –设备细节

| SEQ | LEN | DT | OPT | RP/# | TBL# | ITEM # | ELEMENT NAME |
|---|---|---|---|---|---|---|---|
| 1 | 22 | EI | R | | | 01479 | Equipment Instance Identifier<br>设备实例标识符 |
| 2 | 26 | TS | R | | | 01322 | Event Date/Time<br>事件日期/时间 |
| 3 | 250 | CE | C | | 0365 | 01323 | Equipment State<br>设备状态 |
| 4 | 250 | CE | O | | 0366 | 01324 | Local/Remote Control State<br>本地/远程控制情况 |
| 5 | 250 | CE | O | | 0367 | 01325 | Alert Level<br>警告级别 |

## 13.4.1.0 EQU field definitions EQU 字段定义

### 13.4.1.1 EQU-1 Equipment instance identifier (EI) 01479

```
Components: <entity identifier (ST)> ^ <namespace ID (IS)> ^ <universal ID (ST)> ^
            <universal ID type (ID)>

组成：<实体标识符 (ST)> ^ <命名空间 (IS)> ^ <全局 ID(ST)> ^ <全局 ID 类型 (ID)
```

Definition: This field identifies the equipment. This is the identifier from an institution's master list of equipment. The <namespace ID> identifies the institution.定义：这一字段定义了设备。这是一个从设备机构主列表来的标识符。<名称 ID>指明了机构。

### 13.4.1.2 EQU-2 Event date/time (TS) 01322

Definition: This field is the date/time that the event (e.g., state transition, issuing of command, finishing of command execution) occurred. 定义：这一字段定义了事件（状态改变、发布命令、命令执行完毕）发生的时间。

### 13.4.1.3 EQU-3 Equipment state (CE) 01323

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^
            <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of
            alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代系统标识符(ST)> ^ <替代系统文
            本(ST)> ^ <替代系统编码系统名称(IS)>
```

Definition: This field identifies the status that the equipment was in at the time that the transaction was initiated. Refer to *HL7 Table 0365 – Equipment state* for valid values. The Equipment State is required in the ESU message and is optional otherwise. 定义：这一字段定义了事务初始时设备的状态。参看 *HL7 表 0365 –设备状态* 来得到合法的值。设备状态在 ESU 消息中使用，是可选择的字段。.

HL7 Table 0365 - Equipment state

HL7 表 0365 –设备状态

| Value | Description |
|---|---|
| PU | Powered Up 已开机 |
| IN | Initializing 初始化 |
| ID | Idle 空闲 |
| CO | Configuring 正在配置 |
| OP | Normal Operation 正常运行 |
| CL | Clearing 正在清空 |
| PA | Pausing 正在暂停 |
| PD | Paused 已暂停 |
| ES | E-stopped E-已停止 |
| | (null) No state change （null）无状态变化 |

This table is based on LECIS (see sub-chapter “Introduction and Overview”) 这张表是以 LECIS（参看“总论”一章）为基础的。

### 13.4.1.4 EQU-4 Local/remote control state (CE) 01324

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^
            <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of
            alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代系统标识符(ST)> ^ <替代系统文
            本(ST)> ^ <替代系统编码系统名称(IS)>
```

Definition: This field identifies the current state of control associated with the equipment. An equipment can either work autonomously (‘Local’ control state) or it can be controlled by another system, e.g., LAS computer (‘Remote’ control state). Refer to *HL7 Table 0366 – Local/remote control state* for valid values. 定义：这一字段定义了和设备相关的控制的当前的状态。一个设备既可以自治工作（本地控制状态），也可以被其他系统（如：LAS 计算机）控制（远程控制状态）。参看 *HL7 表 0366 –本地/远程控制状态*来得到正确的值。

HL7 Table 0366 - Local/remote control state

HL7 表 0366 –本地/远程控制状态

| Value | Description |
|---|---|
| L | Local 本地 |
| R | Remote 远程 |
| | (null) No state change (null)无状态变化 |

This table is based on LECIS (see sub-chapter “Introduction and Overview”) 这张表是以 LECIS（参看“总论”一章）为基础的。

### 13.4.1.5 EQU-5 Alert level (CE) 01325

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^
            <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of
            alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代系统标识符(ST)> ^ <替代系统文
            本(ST)> ^ <替代系统编码系统名称(IS)>
```

Definition: This field identifies the highest level of the alert state (e.g., highest alert severity) that is associated with the indicated equipment (e.g. processing event, inventory event, QC event). Refer *to HL7 Table 0367 – Alert level* for valid values. 定义：这一字段定义了和在处理事件、清单事件、QC 事件等事件中指明的设备相关的警告状态的级别（如：最高警告）。。参看 *HL7 表 0367 –警告级别*来得到正确的值

HL7 Table 0367 - Alert level

HL7 表 0367 – 警告级别

| Value | Description | Note |
|---|---|---|
| N | Normal<br>正常 | No Corrective Action Needed<br>不需要纠正行为 |
| W | Warning<br>警告 | Corrective Action Anticipated<br>期望纠正行为 |
| S | Serious<br>严重 | Corrective Action Required<br>需要纠正行为 |
| C | Critical<br>危急 | Shut Down, Fix Problem and Re-init<br>关机，解决问题并且重新初始化 |
| | (null) No level change<br>(null) 无状态改变 | |

## 13.4.2 ISD – interaction status detail segment ISD – 相互作用状态细节段

The interaction detail segment contains information about the status of specific interaction (e.g., processing — see section Glossary) on the specific equipment.相互作用细节段包含指定的相互作用的状态信息（如：处理-参见词汇表一节）

HL7 Attribute Table – ISD – Interaction Status Detail

HL7 属性表– ISD – 相互作用状态细节

| SEQ | LEN | DT | OPT | RP/# | TBL# | ITEM # | ELEMENT NAME |
|---|---|---|---|---|---|---|---|
| 1 | 20 | NM | R | | | 01326 | Reference Interaction Number (unique |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | identifier)<br>相互作用码（唯一标识符） |
| 2 | 250 | CE | O | | 0368 | 01327 | Interaction Type Identifier<br>相互作用类型标识符 |
| 3 | 250 | CE | R | | 0387 | 01328 | Interaction Active State<br>相互作用活动状态 |

### 13.4.2.0 ISD field definitions ISD 字段定义

### 13.4.2.1 ISD-1 Reference interaction number (NM) 01326 ISD-1 相互作用码 (NM) 01326

Definition: This number uniquely identifies the interaction. If the interaction is performed as the result of a previous command, then the Reference Command Number should be used. (See **13.4.5.1 ECD-1** Reference command number (NM) 01390).定义：这一字段定义了相互作用唯一的标识符。如果这种相互作用是上一个命令的结果，则应该使用命令码（参见 **13.4.5.1 ECD-1** Reference command number (NM) 01390。

### 13.4.2.2 ISD-2 Interaction type identifier (CE) 01327

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代系统标识符(ST)> ^ <替代系统文本(ST)> ^ <替代系统编码系统名称(IS)>

Definition: This field specifies the type of interaction. If the interaction is performed as the result of a previous command, then the interaction type as specified *in User-defined Table 0368 - Remote control command* should be used. 定义：这一字段定义了相互作用类型。如果这种相互作用是上一个命令的结果，则应使用这种相互作用类型（ *在用户自定义表 0368 – 远程控制命令*中定义）。

### 13.4.2.3 ISD-3 Interaction active state (CE) 01328

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代系统标识符(ST)> ^ <替代系统文本(ST)> ^ <替代系统编码系统名称(IS)>

Definition: This field transfers the state of the interaction. If the interaction is performed as the result of a previous command, then the interaction state should be one of the Command Responses (Refer to *User-defined Table 0387 – Command response*). If the interaction is not performed as a result of a command (e.g., periodically time triggered automatic maintenance) then this state is interaction specific, and should refer to either the LECIS state transitions for interactions or a user or equipment specific table. 定义：这一字段定义了相互作用状态。如果这种相互作用是上一个命令的结果，相互作用状态应该是命令的响应之一（参见 *在用户自定义表 0387 – 命令回答*）。如果这种相互作用不是一个命令的结果（如：定时触发自动维护），那么这一状态是相互作用细节，并应该涉及到 LECIS 相互作用状态改变或用户或设备细节表。

### 13.4.3 SAC– specimen and container detail segment SAC– 标本和容器细节段

The container detail segment is the data necessary to maintain the containers that are being used throughout the Laboratory Automation System. 容器细节段包含了维护实验室自动化系统中所使用容器所必需的数据。

HL7 Attribute Table – SAC – Specimen and container detail 标本和容器细节

| SEQ | LEN | DT | OPT | RP/# | TBL# | ITEM # | ELEMENT NAME |
|---|---|---|---|---|---|---|---|
| 1 | 80 | EI | O | | | 01329 | External Accession Identifier<br>外部添加标识符 |
| 2 | 80 | EI | O | | | 01330 | Accession Identifier<br>添加标识符 |
| 3 | 80 | EI | C | | | 01331 | Container Identifier<br>容器标识符 |
| 4 | 80 | EI | C | | | 01332 | Primary (parent) Container Identifier<br>主（父）容器标识符 |
| 5 | 80 | EI | O | | | 01333 | Equipment Container Identifier<br>设备容器标识符 |
| 6 | 300 | CM | O | | 0070/ 0369 | 00249 | Specimen Source<br>标本源 |
| 7 | 26 | TS | O | | | 01334 | Registration Date/Time<br>登记日期/时间 |
| 8 | 250 | CE | O | | 0370 | 01335 | Container Status<br>容器状态 |
| 9 | 250 | CE | O | | 0378 | 01336 | Carrier Type<br>支架类型 |
| 10 | 80 | EI | O | | | 01337 | Carrier Identifier<br>支架标识符 |
| 11 | 80 | NA | O | | | 01338 | Position in Carrier<br>在支架中的位置 |
| 12 | 250 | CE | O | | 0379 | 01339 | Tray Type – SAC<br>底托类型-SAC |
| 13 | 80 | EI | O | | | 01340 | Tray Identifier<br>底托标识符 |
| 14 | 80 | NA | O | | | 01341 | Position in Tray<br>在底托中的位置 |
| 15 | 250 | CE | O | Y | | 01342 | Location<br>地点 |
| 16 | 20 | NM | O | | | 01343 | Container Height<br>容器高度 |
| 17 | 20 | NM | O | | | 01344 | Container Diameter<br>容器直径 |
| 18 | 20 | NM | O | | | 01345 | Barrier Delta<br>障碍层 |
| 19 | 20 | NM | O | | | 01346 | Bottom Delta<br>底层 |
| 20 | 250 | CE | O | | | 01347 | Container Height/Diameter/Delta Units<br>容器高度/直径/层单位 |
| 21 | 20 | NM | O | | | 00644 | Container Volume<br>容器容积 |
| 22 | 20 | NM | O | | | 01349 | Available Volume<br>可用容积 |
| 23 | 20 | NM | O | | | 01350 | Initial Specimen Volume<br>初始标本体积 |
| 24 | 250 | CE | O | | | 01351 | Volume Units |

| SEQ | LEN | DT | OPT | RP/# | TBL# | ITEM # | ELEMENT NAME |
|---|---|---|---|---|---|---|---|
| | | | | | | | 体积单位 |
| 25 | 250 | CE | O | | 0380 | 01352 | Separator Type<br>分离物类型 |
| 26 | 250 | CE | O | | 0381 | 01353 | Cap Type<br>盖类型 |
| 27 | 250 | CE | O | Y | 0371 | 00647 | Additive<br>添加剂 |
| 28 | 250 | CE | O | | | 01355 | Specimen Component<br>标本组成 |
| 29 | 20 | SN | O | | | 01356 | Dilution Factor<br>稀释因子 |
| 30 | 250 | CE | O | | 0373 | 01357 | Treatment<br>处理 |
| 31 | 20 | SN | O | | | 01358 | Temperature<br>温度 |
| 32 | 20 | NM | O | | | 01359 | Hemolysis Index<br>溶血指标 |
| 33 | 250 | CE | O | | | 01360 | Hemolysis Index Units<br>溶血指标单位 |
| 34 | 20 | NM | O | | | 01361 | Lipemia Index<br>血脂指标 |
| 35 | 250 | CE | O | | | 01362 | Lipemia Index Units<br>血脂指标单位 |
| 36 | 20 | NM | O | | | 01363 | Icterus Index<br>黄疸指标 |
| 37 | 250 | CE | O | | | 01364 | Icterus Index Units<br>黄疸指标单位 |
| 38 | 20 | NM | O | | | 01365 | Fibrin Index<br>纤维蛋白指标 |
| 39 | 250 | CE | O | | | 01366 | Fibrin Index Units<br>纤维蛋白指标单位 |
| 40 | 250 | CE | O | Y | 0374 | 01367 | System Induced Contaminants<br>导致污染的系统 |
| 41 | 250 | CE | O | Y | 0382 | 01368 | Drug Interference<br>药品影响 |
| 42 | 250 | CE | O | | 0375 | 01369 | Artificial Blood<br>人造血 |
| 43 | 250 | CE | O | Y | 0376 | 01370 | Special Handling Considerations<br>特殊处理考虑 |
| 44 | 250 | CE | O | Y | 0377 | 01371 | Other Environmental Factors<br>其他环境因素 |

### 13.4.3.0 SAC field definitions SAC 字段定义

### 13.4.3.1 SAC-1 External accession identifier (EI) 01329

Components: <entity identifier (ST)> ^ <namespace ID (IS)> ^ <universal ID (ST)> ^ <universal ID type (ID)>

组成：<实体标识符 (ST)> ^ <命名空间 (IS)> ^ <全局 ID(ST)> ^ <全局 ID 类型 (ID)

Definition: This field identifies the laboratory accession (see section *Glossary*). This identifier is assigned by the external laboratory information system. 定义：这一字段定义了在实验室添加（参见词汇一节）信息。这个标识符是由外部的实验室信息系统分配的。

Example: If laboratory A sends a specimen to laboratory B, then within laboratory B this field contains accession identifier of lab A.例：如果实验室 A 送了一个标本到实验室 B，则在实验室 B 中这一字段包含了实验室 A 的添加标识符。

### 13.4.3.2 SAC-2 Accession identifier (EI) 01330

```
Components: <entity identifier (ST)> ^ <namespace ID (IS)> ^ <universal ID (ST)> ^
            <universal ID type (ID)>

组成：<实体标识符 (ST)> ^ <命名空间 (IS)> ^ <全局 ID(ST)> ^ <全局 ID 类型 (ID)
```

Definition: This field identifies the laboratory accession (see section *Glossary*). This identifier is assigned by the information system of the laboratory performing the tests. 这一字段定义了在实验室添加（参见词汇一节）信息。这个标识符是有执行检验的实验室的信息系统分配的。

An accession identifier can refer to more than one container. A Container Identifier (see below) is a Unique Identifier for that container. 一个添加标识符对应一个或多个容器。一个容器标识符（见下面）唯一对应一个容器。

### 13.4.3.3 SAC-3 Container identifier (EI) 01331

```
Components: <entity identifier (ST)> ^ <namespace ID (IS)> ^
            <universal ID (ST)> ^ <universal ID type (ID)>

组成：<实体标识符 (ST)> ^ <命名空间 (IS)> ^ <全局 ID(ST)> ^ <全局 ID 类型 (ID)
```

Definition: This field identifies the container. This field is the container's unique identifier assigned by the corresponding equipment. A container may contain the primary (original)

specimen or an aliquot (secondary sample) of that specimen. For primary sample this field contains Primary Container ID; for bar-coded aliquot samples this field contains Aliquot Container ID; for non-bar-coded aliquot samples (e.g., microtiter plate) this field is empty[15] 定义：这一字段指明了容器。这一字段是容器的唯一标识符。这一标识符是由相应的设备分配的。容器中可以装原始标本也可以装标本的分离物。对于原始标本，这一字段包含主容器 ID，对于已条码化的分离物样本这一字段包含分离物容器 ID，对于非条码化样本（如：微滴定量板）这一字段为空[16]。

The NCCLS standard requires a unique identifier for each container introduced into the Laboratory Automation System. The combination of the fields: Primary Container ID, Container ID, Carrier ID / Position, Tray ID / Position must identify the container uniquely within the LAS. The naturally best solution is unique machine-readable id attached to the container (which of course is sufficient to ensure the uniqueness of the fields' combination). A bar code that symbolizes this ID should meet the proposed standard NCCLS AUTO2 (*Laboratory Automation: Bar Codes for Specimen Container Identification).* NCCLS 标准实验室自动化系统中的每一个容器都有一个唯一的标识符。下列这些字段（原始容器 ID、容器 ID、支架 ID/位置、底托 ID/位置）组合在一起必须能够在 LAS 系统中唯一确定一个容器。最好的解决方案是将一个唯一的、依赖于机器的 ID 付给容器（当然这个容器可通过上述字段的组合来唯一确定）。代表这一 ID 的条码可满足 NCCLS AUTO2 (*实验室自动化: 标本容器确定中的条码*)。

### 13.4.3.4 SAC-4 Primary (parent) container identifier (EI) 01332

```
Components: <entity identifier (ST)> ^ <namespace ID (IS)> ^ <universal ID (ST)> ^
            <universal ID type (ID)>

组成：<实体标识符 (ST)> ^ <命名空间 (IS)> ^ <全局 ID(ST)> ^ <全局 ID 类型 (ID)
```

[15] Example of use of container ID fields for various sample types:

| SAC field | Primary container | Aliquot container with Bar-code | Aliquot container without Bar-code, e.g. microtiter well |
|---|---|---|---|
| "Container ID" (SAC-3) | Primary container ID | Aliquot container ID | — |
| "Primary (parent) Container ID" (SAC-4) | — | Primary container ID | Primary container ID |

[16]不同样本类型容器 ID 使用举例：

| SAC 字段 | 原始容器 | 有条码的分离物容器 | 无条码的分离物容器（如：微滴定量板） |
|---|---|---|---|
| "容器 ID" (SAC-3) | 原始容器 ID | 分离物容器 ID | — |
| "原（父）容器 ID" (SAC-4) | — | 原始容器 ID | 原始容器 ID |

Definition: If this field is filled in, it identifies the primary container from which this specimen came. For primary samples this field is empty; for aliquot samples this field should contain the identifier of primary container. 定义：这一字段定义了装未做处理的标本的容器的标识符。对于原标本来说，这一字段为空，对于分离物标本，这一字段应为原标本容器的标识符

### 13.4.3.5 SAC-5 Equipment container identifier (EI) 01333

Components: <entity identifier (ST)> ^ <namespace ID (IS)> ^ <universal ID (ST)> ^ <universal ID type (ID)>

组成：<实体标识符 (ST)> ^ <命名空间 (IS)> ^ <全局 ID(ST)> ^ <全局 ID 类型 (ID)

Definition: This field identifies the container in a particular device (e.g., one container in a carousel or rack of containers within an analyzer, analyzer specific bar code mapping, etc.). 定义：这一字段定义了特殊容器中的标本（如：样品盘或样品架中的容器、分析仪特异的条码映射等）。

### 13.4.3.6 SAC-6 Specimen source (CM) 00249

Components: <specimen source name or code (CE)> ^ <additives (TX)> ^ <free text (TX)> ^ <body site (CE)> ^ <site modifier (CE)> ^ <collection method modifier code (CE)> ^ <specimen role (CE)>

组成：<标本源名称或编码 (CE)> ^ <附加剂 (TX)> ^ <自由文本 (TX)> ^ <采集部位 (CE)> ^ <部位的定语 (CE)> ^ <采集方法定语编码 (CE)> ^ <标本角色 (CE)>

Subcomponents of specimen source name or code: <identifier (ST)> & <test (ST)> & <name of coding system (IS)> & <alternate identifier (ST)> & <alternate text (ST)> & <name of alternate coding system (ST)>

标本源名称或编码的子组成： <标识符 (ST)> & <检验 (ST)> & <译码系统名 (IS)> & <替代系统标识符 (ST)> & <替代系统文本 (ST)> & <替代系统编码系统名称 (ST)>

Subcomponents of body site: <identifier (ST)> & <test (ST)> & <name of coding system (IS)> & <alternate identifier (ST)> & <alternate text (ST)> & <name of alternate coding system (ST)>

采集部位名称或编码的子组成： <标识符 (ST)> & <检验 (ST)> & <译码系统名 (IS)> & <替代系统标识符 (ST)> & <替代系统文本 (ST)> & <替代系统编码系统名称 (ST)>

Subcomponents of site modifier: <identifier (ST)> & <test (ST)> & <name of coding system (IS)> & <alternate identifier (ST)> & <alternate text (ST)> & <name of alternate coding system (ST)>

部位的定语名称或编码的子组成： <标识符 (ST)> & <检验 (ST)> & <译码系统名 (IS)> & <替代系统标识符 (ST)> & <替代系统文本 (ST)> & <替代系统编码系统名称 (ST)>

Subcomponents of collection method modifier code: <identifier (ST)> & <test (ST)> & <name of coding system (IS)> & <alternate identifier (ST)> & <alternate text (ST)> & <name of alternate coding system (ST)>

采集方法定语名称或编码的子组成： <标识符 (ST)> & <检验 (ST)> & <译码系统名 (IS)> & <替代系统标识符 (ST)> & <替代系统文本 (ST)> & <替代系统编码系统名称 (ST)>

Subcomponents of specimen role: <identifier (ST)> & <test (ST)> & <name of coding system (IS)> & <alternate identifier (ST)> & <alternate text (ST)> & <name of alternate coding system (ST)>

标本角色名称或编码的子组成： <标识符 (ST)> & <检验 (ST)> & <译码系统名 (IS)> & <替代系统标识符 (ST)> & <替代系统文本 (ST)> & <替代系统编码系统名称 (ST)>

Definition: This field is the site where the specimen should be obtained or where the service should be performed. 定义：这一字段定义了标本采集或服务实施的位置。

The first component contains the specimen source name or code (as a CE data type component). (Even in the case of observations whose name implies the source, a source may be required, e.g., blood culture: heart blood.) Refer to *HL7 Table 0070 – Specimen source codes* for valid entries. 第一部分包含了标本源的名称或编码（如 CE 数据类型组件）。（在其名字暗示了源的观察实例中，谁的，源也是需要提供的。如：血常规、心脏血）。参见 *HL7 表 0070 – 标本源编码*来得到合法的值。

The second component should include free text additives to the specimen such as heparin, EDTA, or oxalate, when applicable. 第二部分包含了可适用的附加描述标本的自由文本，如：肝磷脂、EDTA、草盐酸。

The third is a free text component describing the method of collection when that information is a part of the order. When the method of collection is logically an observation result, it should be included as a result segment. 第三部分描述了当信息是医嘱的一部分时所采用的收集方法。当收集方法逻辑上是一种观察结果时，收集方法也应被包含在结果段中。

The fourth component specifies the body site from which the specimen was obtained, and the fifth is the site modifier. For example, the site could be antecubital fossa, and the site modifier "right." The components of the CE fields become sub-components. Refer to *HL7 Table 0163 - Administrative site* for valid entries.第四部分描述了标本是从身体的哪一部位采集的。第五部分为部位的定语。。例：部位为前尺骨沟，部位的定语为“右”。此部分可扩展成为一个子组成。参见 *HL7 表 0163 – 管理部位*来得到合法的值。

The sixth component indicates whether the specimen is frozen as part of the collection method. Suggested values are F (Frozen); R (Refrigerated). If the component is blank, the specimen is assumed to be at room temperature.第六部分指出标本在采集过程中是否被冷冻。建议的值为 F（冷冻）、R（冷藏）。如果这一部分为空，则暗示标本是在室温中处理的。

The 7th component indicates the role of the sample. Refer to *User-defined Table 0369 – Specimen role* for suggested values. Each of these values is normally identifiable by the systems and its components and can influence processing and data management related to the specimen. 第七部分表明样本的角色。参见*用户自定义表 0369 –标本角色*

User-defined Table 0369 - Specimen role

用户自定义表 0369 – 标本角色

| Value 值 | Description 描述 |
|---|---|
| P | Patient (default if blank component value)<br>患者（如果此部分为空，这为默认值） |
| Q | Control specimen<br>控制标本 |

| Value 值 | Description 描述 |
|---|---|
| C | Calibrator<br>校正名 |
| B | Blind Sample<br>空白样本 |
| R | Replicate (of patient sample as a control)<br>重复样品（患者样本作为质控） |

### 13.4.3.7 SAC-7 Registration date/time (TS) 01334

Definition: This field is the date/time that the container was last registered with the "automated system.", e.g., reading of a container bar code by a device. 定义：这一字段定义了最近一次被"自动化系统"登记的日期/时间。例：一个设备读出容器的条码。

### 13.4.3.8 SAC-8 Container status (CE) 01335

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^
            <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of
            alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代系统标识符(ST)> ^ <替代系统文
            本(ST)> ^ <替代系统编码系统名称(IS)>
```

Definition: This field identifies the status of the unique container in which the specimen resides at the time that the transaction was initiated. Refer to *HL7 Table 0370 - Container status* for valid values. The equipment specific container status should be sent as *<alternate identifier>* as needed. 定义：这一字段定义了事件初始化时标本放入的唯一的容器的状态。参见 *HL7 表 0370 – 容器状态*来获得合法的值。设备特定容器状态如果需要，应被写入 *<替换标识符>*。

HL7 Table 0370 - Container status

HL7 表 0370 – 容器状态

| Value 值 | Description 描述 |
|---|---|
| I | Identified 已识别的 |
| P | In Position 到位的 |
| O | In Process 处理中的 |
| R | Process Completed<br>处理完成的 |
| L | Left Equipment<br>离开设备的 |
| M | Missing 缺失的 |
| X | Container Unavailable |

| Value 值 | Description 描述 |
|---|---|
| | 容器不可用 |
| U | Unknown 未知的 |

The container states are relevant for the exchange of information among devices (within the LAS). Not all of them are relevant for information transfer between the LAS and the LIS. 容器状态用于 LAS 中的设备之间交换信息。并不是它们中的全部都和 LAS 与 LIS 之间的信息传递相关。

In the explanations below the system means the LAS or any equipment interfaced to it or to another equipment.在下面的解释中系统是指 LAS 或是可和 LAS 或其他设备接口的设备。

*Identified* status is used by one system to inform another that it has received a container. In the exchange between the LAS and LIS the *Identified* status can be used for reporting of the "In Lab" (Specimen Received) status. In some cases this may not be equal to the first event of sample recognition. 已识别状态用于一个系统通知另一个系统它已经收到了容器。在 LAS 与 LIS 之间交换信息时已识别状态可被用于报告"在实验室"（标本已收到）状态。在某些例子中，已识别状态并不等于样本识别的第一个事件。

*In Position* status is used by one system to inform another that the container is in position for specimen transfer (e.g., container removal from track, pipetting, etc.).*在位*状态用于一个系统通知另一个系统为了传送标本容器已到位，如：容器从轨道上移开、正在吸液等）。

*In Process* status is used by one system to inform another that the specific container is being processed by the equipment. It is useful as a response to a query about Container Status, when the specific step of the process is not relevant.*正在处理*状态用于一个系统通知另一个系统指定的容器正在被设备处理。当处理程度无关时，它可作为一个容器状态查询的应答。

*Process Completed* status is used by one system to inform another that the processing has been completed, but the container has not been released from that system. *处理完成*状态用于一个系统通知另一个系统处理过程已经完成，但容器还没有从系统中释放。

*Left Equipment* status is used by one system to inform another that the container has been released from that system.*离开设备*状态用于一个系统通知另一个系统容器已经从系统中被释放。

*Missing* status is used by one system to inform another that the container did not arrive at its next expected location.*缺失状态*用于一个系统通知另一个系统容器还没有到达下一个预期位置。

*Cancelled* status is used by one system to inform another that the container is no longer available within the scope of the system (e.g., tube broken or discarded).*取消*状态用于一个系统通知另一个系统在此系统的范围内无效（如：试管破裂或丢弃）。

*Unknown* status is used by one system to inform another that the container has not been identified. 未知状态用于一个系统通知另一个系统容器没有被识别。

### 13.4.3.9 SAC-9 Carrier type (CE) 01336

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^
            <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of
            alternate coding system (IS)>
```

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代系统标识符(ST)> ^ <替代系统文本(ST)> ^ <替代系统编码系统名称(IS)>

Definition: This field identifies the type of the carrier (see section Glossary). Refer *to User-defined Table 0378 – Carrier type* for suggested values. Because the geometry can be different, the carrier type should, if possible, express the number of positions in the carrier. 定义：这个字段定义了支架的类型（参见词汇一节）。参见*用户自定义表 0378 – 支架类型*来得到合法的值。因为几何学上的不同，支架类型应该是支架中的位置的数量。

The definition assumes hierarchical nesting using the following phrases: container is located in a carrier, carrier is located in a tray.这一定义假设了一种使用下列语法的分层结构嵌套：容器在支架上，支架在底托上。

User-defined Table 0378 – Carrier type

用户自定义表 0378 – 支架类型

| Value 值 | Description 描述 |
|---|---|
| | No suggested values defined<br>没有推荐的定义值 |

Examples of values: R01 (one position carrier), R05 (five position carrier)值的例子：R01（一个位置的支架）、R05（五个位置的支架）。

### 13.4.3.10 SAC-10 Carrier identifier (EI) 01337

Components: <entity identifier (ST)> ^ <namespace ID (IS)> ^ <universal ID (ST)> ^ <universal ID type (ID)>

组成：<实体标识符 (ST)> ^ <命名空间 (IS)> ^ <全局 ID(ST)> ^ <全局 ID 类型 (ID)

Definition: This field identifies the carrier. It is the ID (e.g., number or bar code) of the carrier where the container (e.g., tube) is located. 定义：这一字段定义了支架。它是容器（如：试管）放置的支架的 ID 码。

Example: A carrier could be a rack with single or multiple specimen containers. A carrier is usually used for automated specimen transport. Multiple carriers can be stacked in a tray, which is then used for manual or automatic transport.例：支架是一个可放置一个或多个标本容器的架子。支架通常被用来自动传输标本。多个支架可被堆叠在一个底托上来进行手工的或自动的传输。

### 13.4.3.11 SAC-11 Position in carrier (NA) 01338

Components: <value1 (NM)> ^ <value2 (NM)> ^ <value3 (NM)> ^ <value4 (NM)> ^ ...

组成: <值 1 (NM)> ^ <值 2 (NM)> ^ <值 3 (NM)> ^ <值 4 (NM)> ^ ...

Definition: This field identifies the position of the container in the carrier (e.g., 1…3…). The sub-components allow, if necessary, to transfer multiple axis information, e.g., 2-dimensional carrier

(X^Y).定义：这一字段定义了支架上容器的位置（如：1…3…）。如果有必要的话，它的子组成可以表达多轴信息（如：二维支架（X^Y）。

### 13.4.3.12 SAC-12 Tray type - SAC (CE) 01339 底托

### 13.4.3.13 类型

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate
            identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system
            (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)>
            ^ <替代编码系统名称(IS)>
```

Definition: This field identifies the type of the tray (see section Glossary). Refer to *User-defined Table 0379 – Tray type* for suggested values. Because the geometry can be different, the tray type should if possible express the number of positions in the tray. 定义：这一字段定义了底托类型（参见词汇一节）。参见*用户自定义表 0379 – 底托类型*中给出的参考值。假如可能的话，从几何学角度来说，底托类型可以表示出在底托上的位置数量。

The definition assumes hierarchical nesting using the following phrases: container is located in a carrier, carrier is located in a tray.这个定义可以用下面的术语分级嵌套的理解：容器被定位在一个支架上，支架被定位在底托上。

User-defined Table 0379 – Tray type

用户自定义表 0379 – 底托类型

| Value 值 | Description 描述 |
|---|---|
| | No suggested values defined<br>没有被定义的参考值 |

### 13.4.3.14 SAC-13 Tray identifier (EI) 01340 底托标示符

```
Components: <entity identifier (ST)> ^ <namespace ID (IS)> ^ <universal ID (ST)> ^
            <universal ID type (ID)>

组成：<实体标识符 (ST)> ^ <命名空间 ID (IS)> ^ <全局 ID(ST)> ^ <全局 ID 类型 (ID)
```

Definition: This field identifies the tray identifier (e.g., a number of a tray or a bar code on the tray), where the container carrier is located.定义：这一字段定义了底托标示符（举例来说，就是一个底托号或者在底托上的条形码），通过这个标示符就可以找到容器支架的位置。

### 13.4.3.15 SAC-14 Position in tray (NA) 01341 在底托上的位置

```
Components: <value1 (NM)> ^ <value2 (NM)> ^ <value3 (NM)> ^ <value4 (NM)> ^ ...

组件: <值 1 (NM)> ^ <值 2 (NM)> ^ <值 3 (NM)> ^ <值 4 (NM)> ^ ...
```

Definition: This field identifies the position of the carrier in the tray. The sub-components allow, if necessary, to transfer multiple axis information, e.g., 2-dimensional tray (X^Y).定义：这一字

段定义了支架在底托上为位置。假如必要的话，子成分允许传递多重轴信息。 例如，二维空间底托（X^Y）。

### 13.4.3.16 SAC-15 Location (CE) 01342 位置

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate
            identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system
            (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代
            编码系统名称(IS)>
```

Definition: This field is the physical location that the specimen was at the time that the transaction was initiated. The location description can vary with the LAS. For example, it can be an X,Y,Z coordinate in a storage system; a refrigerator number and drawer number where the container-carrier-tray is located; or it can be the name of the institution and the laboratory which owns the container currently. The repeating of this field allows for hierarchical representation of location (lowest level first), e.g., shelf number, refrigerator storage id, lab name, institution name, etc. 定义：这一字段说明了事务被启动时标本所在的物理位置。这个位置可以被 LAS 描述为多样化。例如，它在一个储藏系统中可以用 X,Y,Z 三维坐标表示；用一个冷藏库号和抽屉号就可以定位出容器-支架-底托的位置；或者也可以是拥有当前容器的机构实验室名称。重复的字段允许位置被层次化的表示（最低级优先），例如，搁板号，冷藏库储藏 ID 号，实验室名称，机构名称等等。

### 13.4.3.17 SAC-16 Container height (NM) 01343 容器高度

Definition: This field identifies the height of the container in units specified below. 定义：这个字段定义了容器高度，关于容器高度在后面的章节中有详细说明。

### 13.4.3.18 SAC-17 Container diameter (NM) 01344 容器直径

Definition: This field identifies the outside diameter of the container in units specified below. 定义：这个字段定义了容器外径，关于容器外径在后面的章节中有详细说明。

### 13.4.3.19 SAC-18 Barrier delta (NM) 01345 障碍层

Definition: This field identifies the distance from the Point of Reference to the separator material (barrier) within the container in units specified below. This distance may be provided by the LAS to the instrument and/or specimen processing/handling device to facilitate the insertion of a sampling probe into the specimen without touching the separator. Refer to Point Of Reference definition in section *Glossary* or in NCCLS standard AUTO5 *Laboratory Automation: Electromechanical Interfaces*.定义：这个字段定义了从在容器中 XYZ 坐标系顶点到分离介质（障碍物）的距离，在后面的章节中会详细说明。这个距离可以由 LAS 提供给标本处理设备，帮助它在往标本中插入取样探测器时，不至于碰到隔离层。XYZ 坐标系顶点在词汇一节或 NCCLS 标准 AUTO5 实验室自动化中已经说明了：机电接口。

### 13.4.3.20 SAC-19 Bottom delta (NM) 01346 底层

Definition: This field identifies the distance from the Point of Reference to the outside bottom of the container in units specified below. Refer to Point Of Reference definition in section *Glossary* or in NCCLS standard AUTO5 *Laboratory Automation: Electromechanical Interfaces*.定义：这一字段定义了从 XYZ 坐标系顶点到容器底部的距离，在后面的章节中有详细说明。XYZ 坐标系顶点在词汇一节或 NCCLS 标准 AUTO5 实验室自动化中已经说明了：机电接口。

### 13.4.3.21 SAC-20 Container diameter/height/delta units (CE) 01347 容器直径/高度/层单位

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate
            identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system
            (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代
            编码系统名称(IS)>
```

Definition: This field is the unit identifier that is being used to describe the diameter, height and deltas of the container. If the units are ISO+ units, they should be recorded as single case abbreviations. If the units are ANS+ or L (local), the units and the source code table must be recorded, except that in this case, component delimiters should be replaced by subcomponent delimiters. The default unit is millimeters (mm), which should be assumed if no units are reported. 定义：这一字段是用来描述容器直径，高度，层的单位标示符。如果这些单位格式是 ISO+单位名，它们将被记录为单一案例的缩写。如果这些单位格式是 ANS+单位名或者 L（局部的）+单位名，这些单位和源代码表必须被记录在案，除非有一种情况，就是定界符的构成部分能被更小的定界符代替。如果没有声明单位，假定的默认单位就是毫米（mm）。

### 13.4.3.22 SAC-21 Container volume (NM) 00644 容器体积

Definition: This field indicates the capacity of the container in the units specified below.定义：这一字段指出容器的容量，关于容器容量在后面的章节中有详细说明。

### 13.4.3.23 SAC-22 Available volume (NM) 01349 可用容量

Definition: This field identifies the current volume available for use in the container in the units specified below.定义：这一字段定义了当前容器的可用容量，关于可用容量在后面的章节中有详细说明。

### 13.4.3.24 SAC-23 Initial specimen volume (NM) 01350 初始化标本体积

Definition: This field identifies the draw volume of the container in the units specified below.定义：这一字段定义了容器的汲取体积，在后面的章节中有详细说明。

### 13.4.3.25 SAC-24 Volume units (CE) 01351 体积单位

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate
            identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system
            (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代
            编码系统名称(IS)>
```

Definition: This field is the unit identifier that is being used to describe the volume of the container. If the units are ISO+ units, they should be recorded as single case abbreviations. The default unit is milliliters (ml), which should be assumed if no units are reported. 定义：这一字段是用来描述容器体积的单位标示符。如果这些单位格式是 ISO+单位名，它们将被记录为单一案例的缩写。如果没有声明单位，假定的默认单位就是毫升（ml）。

### 13.4.3.26 SAC-25 Separator type (CE) 01352 分离物类型

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate
            identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system
            (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代
            编码系统名称(IS)>
```

Definition: This field identifies the type of the separator that is being used (e.g., gel separator in the container – not to be confused with the communication separators). Refer *to* *User-defined Table 0380 – Separator type* for suggested values. It is recommended that the first table entry be "NO" meaning "No Separator". 定义：这一字段是定义了正在使用的分离物类型（举例，在容器中的凝胶体分离物不要与通讯分离物混淆）。参见*用户自定义表 0380 – 分离物类型*中给出的参考值。建议第一个表的入口是"NO"，意味着"没有分离物"。

User-defined Table 0380 – Separator type

用户自定义表 0380 – 分离物类型

| Value | Description |
|---|---|
| | No suggested values defined<br>没有被定义的参考值 |

Examples of values: NO (no separator), GEL (gel separator), M01 (manufacturer specific).事例值：NO（没有分离物），GEL（凝胶体分离物），M01（特殊制造商）

### 13.4.3.27 SAC-26 Cap type (CE) 01353 盖类型

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate
            identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system
            (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代
            编码系统名称(IS)>
```

Definition: This field indicates the type of cap that is to be used with this container for decapping, piercing or other mechanisms. Refer to *User-defined Table 0381 – Cap type* for suggested values. 定义：这一字段说明了盖类型被用在盖子可以揭开、刺穿的容器上或其它机械装置上。参见*用户自定义表 0381 – 盖类型*中给出的参考值。

User-defined Table 0381 – Cap type

用户自定义表 0381 – 盖类型

| Value | Description |
|---|---|
| | No suggested values defined<br>没有定义好的参考值 |

Examples of values: SCR (screw cap), PSH (push cap), FOIL (foil).例子：SCR（螺丝帽），PSH（按压盖），FOIL（金属薄片）。

### 13.4.3.28 SAC-27 Additive (CE) 00647 添加剂

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代编码系统名称(IS)>

Definition: This field identifies any additives introduced to the specimen before or at the time of collection. It is a repetitive field. Refer to *HL7 Table 0371 – Additive* for valid values. The table's values are taken from *NCCLS AUTO4*. The value set can be extended with user specific values.定义：这一字段定义了在收集标本的时候或者收集标本之前被传入到标本中的任何一种附加剂。这是一个重复的字段。参见 *HL7 表 0371 – 添加剂*中列出的合法值。表中的值是从 *NCCLS AUTO4* 得到的。这些值的设置可以扩展为用户指定的值。

HL7 Table 0371 – Additive

HL7 表 0371 – 添加剂

| Value | Description |
|---|---|
| EDTK | Potassium/K EDTA 钾/K EDTA |
| EDTN | Sodium/Na EDTA 钠/Na EDTA |
| HEPL | Lithium/Li Heparin 肝素锂 |
| HEPN | Sodium/Na Heparin 肝素钠 |
| C32 | 3.2% Citrate 3.2% 枸盐酸盐 |
| C38 | 3.8% Citrate 3.8% 枸盐酸盐 |
| BOR | Borate 硼酸盐 |
| HCL6 | 6N HCL |

### 13.4.3.29 SAC-28 Specimen component (CE) 01355 标本组成

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代编码系统名称(IS)>

Definition: This field identifies the specimen component, e.g., supernatant, sediment, etc. Refer to *User-defined Table 0372 – Specimen component* for valid values. This table's values are taken from *NCCLS AUTO4*. The value set can be extended with user specific values.定义：这一字段定义了标本组成，如上清液，沉淀物等。参见*用户自定义表 0372 – 标本组成*中列出的合法值。表中的值取自 *NCCLS AUTO4*。这些值的设置可以引用用户自定义的特定值。

User-defined Table 0372 - Specimen component

用户自定义表 0372 – 标本组成

| Value | Description |
|---|---|
| SUP | Supernatant 上清液 |
| SED | Sediment 沉淀物 |

| Value | Description |
|---|---|
| BLD | Whole blood, homogeneous 全血，均匀的 |
| BSEP | Whole blood, separated 分离后全血 |
| PRP | Platelet rich plasma 富含血小板血浆 |
| PPP | Platelet poor plasma 乏血小板血浆 |
| SER | Serum, NOS (not otherwise specified) 血清,NOS(无特定要求) |
| PLAS | Plasma, NOS (not otherwise specified) 血浆,NOS(无特定要求) |

### 13.4.3.30 SAC-29 Dilution factor (SN) 01356 稀释要素

Components: <comparator (ST)> ^ <num1 (NM)> ^ <separator/suffix (ST)> ^ <num2 (NM)>

组件：<比较仪 (ST)> ^ <数字 1 (NM)> ^ <离析器/下标 (ST)> ^ <数字 2 (NM)>

Definition: This field identifies the factor of dilution already performed on the specimen. The equipment entity that changes the dilution is responsible for sending this information to other equipment. If the endogenous content of the test (analyte) in the diluent is required for the calculation of the test (analyte) concentration, then the test (analyte) specific values should be exchanged between the systems via Master Files or other means.定义：这一字段定义了在样本中已经执行的稀释要素。执行稀释的设备实体必须将这个信息传送给另一个设备。假如在稀释液内生容量的检验（分析）中被作为检验（分析）浓度的计算，那么检验（分析）得到的值应该通过主文件系统或者其它方法进行交换。

Examples of use:例如：

|^1^:^5| - means dilution 1 to 5, i.e., 1 part sample, 4 parts diluent |^1^:^5|表示由 1 稀释为 5，也就是说，其中 1 是样本，4 是稀释液。

|^1^+| - sample is diluted, but the factor is unknown |^1^+| -样本被稀释，但稀释要素不知道。

|^1^:^1| - not diluted sample |^1^:^1| 没有被稀释的样本

|| - dilution not changed ||稀释物没有被改变

### 13.4.3.31 SAC-30 Treatment (CE) 01357 处理

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代编码系统名称(IS)>

Definition: This field identifies the specimen collection treatment. Refer to *User-defined Table 0373 – Treatment* for valid values. This table's values are taken from *NCCLS AUTO4*. The value set can be extended with user specific values.定义：这一字段定义了标本收集的处理。参见*用户自定义表 0373 – 处理*中列出的合法值。表中的值取自 *NCCLS AUTO4*。这些值的设置可以引用用户自定义的特定值。

User-defined Table 0373 – Treatment

用户自定义表 0373 – 处理

| Value 值 | Description 描述 |
|---|---|
| LDLP | LDL Precipitation |
| RECA | Recalification |
| DEFB | Defibrination 除纤维 |
| ACID | Acidification 酸性化 |
| NEUT | Neutralization 中和 |
| ALK | Alkalization 碱性化 |
| FILT | Filtration 过滤 |
| UFIL | Ultrafiltration 精确过滤 |

### 13.4.3.32 SAC-31 Temperature (SN) 01358 温度

```
Components:  <comparator (ST)> ^ <num1 (NM)> ^ <separator/suffix (ST)> ^ <num2 (NM)>

组件：<比较仪 (ST)> ^ <数字 1 (NM)> ^ <离析器/下标 (ST)> ^ <数字 2 (NM)>
```

Definition: This field identifies the specimen temperature in degrees Celsius [°C] at the time of the transaction specified in the EQU segment. 定义：这一字段定义了在 EQU 段里指定事务时标本的摄氏温度。

### 13.4.3.33 SAC-32 Hemolysis index (NM) 01359 溶血指标

```
Components:  <comparator (ST)> ^ <num1 (NM)> ^ <separator/suffix (ST)> ^ <num2 (NM)>

组件：<比较仪 (ST)> ^ <数字 1 (NM)> ^ <离析器/下标 (ST)> ^ <数字 2 (NM)>
```

Definition: This field is the index identifier that is being used to describe the Hemolysis Index of the specimen. 定义：这一字段说明了用于描述标本溶血指标的指标标示符。

### 13.4.3.34 SAC-33 Hemolysis index units (CE) 01360 溶血指标单位

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate
            identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system
            (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代
            编码系统名称(IS)>
```

Definition: This field is the unit's identifier that is being used to describe the Hemolysis Index of the specimen. It is recommended to use g/L. (The transmission of the index values is added here instead of the original use of the OBX segments, because the frequency of the transfer of the specimen details justifies use of more efficient mechanism.)定义：这一字段说明了用于描述标本溶血指标的单位标示符。建议用 g/L 克/升。（这个指标值的传送增加在这是用来代替在 OBX 段中使用的原始值的，因为标本详细资料的传输频率的合理性会影响机器设备利用率。）

If this field is null, the recommended value is assumed.如果这个字段为空，那么这个推荐值 g/L 就是默认值。

### 13.4.3.35 SAC-34 Lipemia index (NM) 01361 血脂指标

Definition: This field is the index identifier that is being used to describe the Lipemia Index of the specimen. It is recommended to use the optical turbidity at 600 nm (in absorbance units).定义：这一字段说明了用于描述标本血脂指标的指标标示符。在能见度低的情况建议使用600nm。

### 13.4.3.36 SAC-35 Lipemia index units (CE) 01362 血脂指标单位

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代编码系统名称(IS)>

Definition: This field is the unit's identifier that is being used to describe the Lipemia Index of the specimen. 定义：这一字段说明了用于描述标本的血脂指标的单位标示符。

If this field is null, the recommended value is assumed. 如果这个字段为空，那么这个推荐值就是默认值。

### 13.4.3.37 SAC-36 Icterus index (NM) 01363 黄疸指标

Definition: This field is the index identifier that is being used to describe the Icterus Index of the specimen. 定义：这一字段说明了用于描述标本黄疸指标的指标标示符。

### 13.4.3.38 SAC-37 Icterus index units (CE) 01364 黄疸指标单位

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代编码系统名称(IS)>

Definition: This field is the unit's identifier that is being used to describe the Icterus Index of the specimen. It is recommended to use mMol/L of bilirubin. 定义：这一字段说明了用于描述标本黄疸指标的单位标示符。建议使用胆红素的 mMol/L

If this field is null, the recommended value is assumed. 如果这个字段为空，那么这个推荐值 mMol/L 就是默认值。

### 13.4.3.39 SAC-38 Fibrin index (NM) 01365 纤维蛋白指标

Definition: This field is the index identifier that is being used to describe the Fibrin Index of the specimen. In the case of only differentiating between Absent and Present, we recommend using 0 and 1 respectively and send the field Fibrin Index Units null.定义：这一字段定义了用于描述标本血纤维指标的指标标示符。这个指标只有两种情况：不存在和存在，建议分别用 0 和 1 表示，不使用单位。

### 13.4.3.40 SAC-39 Fibrin index units (CE) 01366 纤维蛋白指标单位

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代编码系统名称(IS)>

Definition: This field is the unit's identifier that is being used to describe the Fibrin Index of the specimen. 定义：这一字段说明了用于描述标本纤维蛋白指标的单位标示符

### 13.4.3.41 SAC-40 System induced contaminants (CE) 01367 引起污染的系统

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代编码系统名称(IS)>

Definition: This field describes the specimen contaminant identifier that is associated with the specimen. Refer to *User-defined Table 0374 – System induced contaminants* for valid values. This table's values are taken from *NCCLS AUTO4*. The value set can be extended with user specific values.定义：这一字段描述了导致标本被污染的污染物标示符。参见*用户自定义表 0374 – 导致污染的系统*中列出的合法值。表中的值取自 *NCCLS AUTO4*。这些值的设置可以引用用户自定义的特定值。

User-defined Table 0374 - System induced contaminants

用户自定义表 0374 – 导致污染的系统

| Value | Description |
|---|---|
| CNTM | Present, type of contamination unspecified<br>目前，没有明确的污染物类型 |

### 13.4.3.42 SAC-41 Drug interference (CE) 01368 药物影响

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代编码系统名称(IS)>

Definition: This field describes the drug interference identifier that is associated with the specimen. Refer to *User-defined Table 0382 – Drug interference* for suggested values. 定义：这一字段描述了会影响标本的相关药物标示符。参见*用户自定义表 0382 –药物影响统*中列出的合法值。

User-defined Table 0382 – Drug interference

用户自定义表 0382 –药物影响统

| Value | Description |
|---|---|
| | No suggested values defined<br>没有定义好的参考值 |

### 13.4.3.43 SAC-42 Artificial blood (CE) 01369 人造血

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate
            identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system
            (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代
            编码系统名称(IS)>
```

Definition: This field describes the artificial blood identifier that is associated with the specimen. Refer to *User-defined Table 0375 – Artificial blood* for valid values. This table's values are taken from *NCCLS AUTO4*. The value set can be extended with user specific values.定义：这一字段说明与标本相关联的人造血标示符。参见*用户自定义表 0375 – 人造血*中列出的合法值。表中的值取自 *NCCLS AUTO4*。这些值的设置可以引用用户自定义的特定值。

User-defined Table 0375 - Artificial blood

用户自定义表 0375 – 人造血

| Value | Description |
|---|---|
| SFHB | Stromal free hemoglobin preparations 无基质血红蛋白试剂 |
| FLUR | Fluorocarbons 碳氟化合物 |

### 13.4.3.44 SAC-43 Special handling considerations (CE) 01370 特殊处理考虑

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate
            identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system
            (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代
            编码系统名称(IS)>
```

Definition: This field describes any special handling considerations that are associated with the specimen. (E.g. centrifugation). Refer to *User-defined Table 0376 – Special handling considerations* for valid values. This table's values are taken from *NCCLS AUTO4*. The value set can be extended with user specific values.定义：定义：这一字段定义了对于标本相关联的任何一种特殊处理的考虑。（例如，离心处理）参见*用户自定义表 0376 – 特殊处理考虑*中列出的合法值。表中的值取自 *NCCLS AUTO4*。这些值的设置可以引用用户自定义的特定值。

User-defined Table 0376 - Special handling considerations

用户自定义表 0376 – 特殊处理考虑

| Value | Description |
|---|---|
| PRTL | Protect from light 避光 |
| CFRZ | Critical Frozen 严格冰冻 |
| CATM | Critical do not expose to atmosphere – Do not uncap 严格封闭 |
| CREF | Critical refrigerated 严格冷藏 |
| CAMB | Critical ambient temperature 严格控制环境温度 |

| Value | Description |
|---|---|
| C37 | Critical maintain at 37C (e.g., cryoglobulin specimen)<br>维持在 37 摄氏度（如： 冷冻血红蛋白标本） |

### 13.4.3.45 SAC-44 Other environmental factors (CE) 01371 其他环境因素

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate
            identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system
            (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代
      编码系统名称(IS)>
```

Definition: This field describes other environmental factors that are associated with the specimen, e.g., atmospheric exposure. Refer to *User-defined Table 0377 – Other environmental factors* for valid values. This table's values are taken from *NCCLS AUTO4*. The value set can be extended with user specific values.定义：这一字段说明了影响标本的其他环境因素，例如，将标本暴露于大气中。参见*用户自定义表 0376 – 其他环境因素*中列出的合法值。表中的值取自*NCCLS AUTO4*。这些值的设置可以引用用户自定义的特定值。

User-defined Table 0377 - Other environmental factors

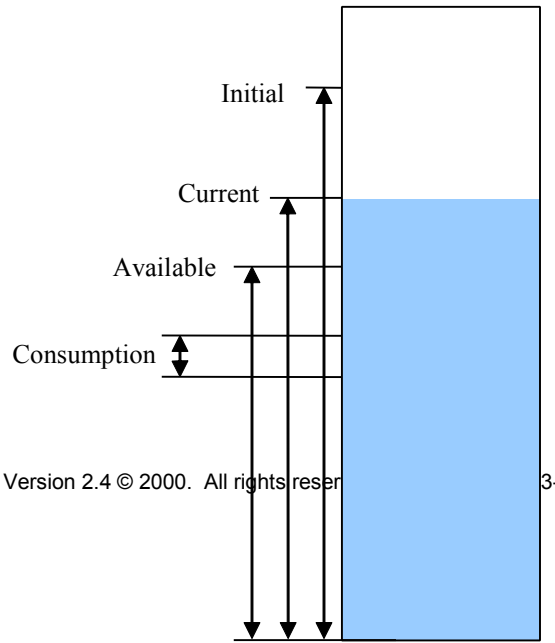
用户自定义表 0376 – 其他环境因素

| Value | Description |
|---|---|
| ATM | Opened container, atmosphere/duration unspecified<br>敞开的容器，未说明暴露在空气及时间 |
| A60 | Opened container, indoor atmosphere, 60 minutes duration<br>敞开的容器，置于户内 60 分钟 |

## 13.4.4 INV – inventory detail segment INV 存货清单细节段

The inventory detail segment is the data necessary to track the inventory of substances (e.g. reagent, tips, waste) on equipment. 存货清单细节段是用来追踪设备中的物质（如试剂，，废物）数量的时时的必需的数据。

**Figure 13-6. Information on the Types of Measures on a Container**



HL7 Attribute Table – INV – Inventory Detail

HL7 属性表– INV – 存货清单细节

| SEQ | LEN | DT | OPT | RP/# | TBL# | ITEM # | ELEMENT NAME |
|---|---|---|---|---|---|---|---|
| 1 | 250 | CE | R | | 0451 | 01372 | Substance Identifier<br>物质标示符 |
| 2 | 250 | CE | R | Y | 0383 | 01373 | Substance Status 物质状态 |
| 3 | 250 | CE | O | | 0384 | 01374 | Substance Type 物质类型 |
| 4 | 250 | CE | O | | | 01532 | Inventory Container Identifier<br>存货清单容器标示符 |
| 5 | 250 | CE | O | | | 01376 | Container Carrier Identifier<br>容器架标示符 |
| 6 | 250 | CE | O | | | 01377 | Position on Carrier<br>容器架上的位置 |
| 7 | 20 | NM | O | | | 01378 | Initial Quantity 初始数量 |
| 8 | 20 | NM | O | | | 01379 | Current Quantity 当前数量 |
| 9 | 20 | NM | O | | | 01380 | Available Quantity 可用数量 |
| 10 | 20 | NM | O | | | 01381 | Consumption Quantity<br>消耗数量 |
| 11 | 250 | CE | O | | | 01382 | Quantity Units 数量单位 |
| 12 | 26 | TS | O | | | 01383 | Expiration Date/Time<br>过期日期/时间 |
| 13 | 26 | TS | O | | | 01384 | First Used Date/Time<br>第一次使用日期/时间 |
| 14 | 200 | TQ | O | | | 01385 | On Board Stability Duration<br>样板稳定时间 |
| 15 | 250 | CE | O | Y | | 01386 | Test/Fluid Identifier(s)<br>检验/流动标示符 |
| 16 | 200 | ST | O | | | 01387 | Manufacturer Lot Number<br>制造商标签号 |
| 17 | 250 | CE | O | | 0385 | 00286 | Manufacturer Identifier<br>制造商标示符 |
| 18 | 250 | CE | O | | 0386 | 01389 | Supplier Identifier<br>供应商标示符 |

## 13.4.4.0 INV field definitions INV 字段定义

### 13.4.4.1 INV-1 Substance identifier (CE) 01372 物质标示符

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代编码系统名称(IS)>

Definition: Unique identifier for the substance that is in inventory. This is a manufacturer-specific identifier. 定义：标志存货清单中物质的唯一标示符。这是由厂商指定的标示符。

User-defined Table 0451 – Substance identifier

用户自定义表 0451 – 物质标示符

| Value | Description |
|---|---|
| ALL | Used for query of all inventory items<br>被用于查询所有存货清单项目 |

### 13.4.4.2 INV-2 Substance status (CE) 01373 物质状态

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代编码系统名称(IS)>

Definition: The status of the inventoried item. The status indicates the current status of the substance. Refer *to HL7 Table 0383 – Substance status* for suggested values.定义：存货项目的状态。这个状态说明物质的当前情况。参见 *HL7 表 0383 – 物质状态*中列出的合法值。

HL7 Table 0383 - Substance status

HL7 表 0383 – 物质状态

| Value | Description |
|---|---|
| EW | Expired Warning 过期警告 |
| EE | Expired Error 过期错误 |
| CW | Calibration Warning 校正警告 |
| CE | Calibration Error 标度错误 |
| QW | QC Warning 质量控制警告 |
| QE | QC Error 质量控制错误 |
| NW | Not Available Warning 不可用警告 |
| NE | Not Available Error 不可用错误 |
| OW | Other Warning 其他警告 |
| OE | Other Error 其他错误 |
| OK | OK Status 可行状态 |

### 13.4.4.3 INV-3 Substance type (CE) 01374 物质类型

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代编码系统名称(IS)>

Definition: The type of substance. Refer to *HL7 Table 0384 – Substance type* for suggested values. 定义：定义物质类型。参见 *HL7 表 0384 – 物质类型*中列出的合法值。

HL7 Table 0384 - Substance type

HL7 表 0384 – 物质类型

| Value | Description |
|---|---|
| SR | Single Test Reagent 一次性实验试剂 |
| MR | Multiple Test Reagent (consumption cannot be tied to orders for single test)<br>重复性实验试剂（不会被一次消耗的试剂） |
| DI | Diluent 稀释剂 |
| PT | Pretreatment 预处理品 |
| RC | Reagent Calibrator 试剂校正名 |
| CO | Control 控制器 |
| PW | Purified Water 纯净水 |
| LW | Liquid Waste 液体废物 |
| SW | Solid Waste 固体废物 |
| SC | Countable Solid Item (e.g., Tip, etc.) 可以记数的固体物质（如，末梢） |
| LI | Measurable Liquid Item 可以测量的液体物质 |
| OT | Other 其他 |

### 13.4.4.4 INV-4 Inventory container identifier (CE) 01532 存货清单容器标示符

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate
            identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system
            (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代
            编码系统名称(IS)>
```

Definition: Identifies the inventory container, e.g., unique identifier of a specific package instance of a specific substance. This is a manufacturer-specific identifier.定义：区分存货清单容器的标示符，例如，特殊物质的特殊包装的唯一标示符。这是由厂商指定的标示符。

### 13.4.4.5 INV-5 Container carrier identifier (CE) 01376 容器架标示符

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate
            identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system
            (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代
            编码系统名称(IS)>
```

Definition: This is the carrier used to transport the substance containers, (e.g., a removable rotor with reagent bottles).定义：用于传送装有物质容器的架子（例如，一个带有试剂瓶的可以移动的转动体）。

### 13.4.4.6 INV-6 Position on carrier (CE) 01377 在架子上的位置

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate
            identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system
            (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代
            编码系统名称(IS)>
```

Definition: Identifies the position (e.g., index) on the carrier.定义：标示在架子上的位置（如指针）。

### 13.4.4.7 INV-7 Initial quantity (NM) 01378 初始数量

Definition: This field identifies the initial quantity of the substance in inventory.定义：这一字段表示存货清单中的物质的原始数量。

### 13.4.4.8 INV-8 Current quantity (NM) 01379 当前数量

Definition: This field is the current quantity, i.e., initial quantity minus what has been actually used.定义：这一字段表示在存货中的当前数量，例如，原有数量的物质因为被使用以后剩下的数量就是当前数量。

### 13.4.4.9 INV-9 Available quantity (NM) 01380 可用数量

Definition: This field is the available quantity of substance. This is the current quantity minus any planned consumption (e.g., tests that are planned).定义：这一字段表示存货物质中可以使用的数量。它指的是当前数量减去任何计划将要消耗（如检验中消耗的）的数量。

### 13.4.4.10 INV-10 Consumption quantity (NM) 01381 消耗数量

Definition: This field is the consumption that is used each time the equipment uses this substance.定义：这一字段表示设备在每次使用时需要消耗的物质。

### 13.4.4.11 INV-11 Quantity units (CE) 01382 数量单位

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate
            identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system
            (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代
            编码系统名称(IS)>
```

Definition: This field is the units of measure of the available quantity. If the units are ISO+ units, they should be recorded as single case abbreviations. If the units are ANS+ or L (local), the units and the source code table must be recorded, except that in this case, component delimiters should be replaced by sub-component delimiters. For example, “l” indicates liters, whereas pt&&ANS+ indicates pints (ANSI units). The default unit is milliliters (ml), which should be assumed if no units are reported.定义：这一字段表示在测量存货物质的可用数量时使用的单位。如果这些单位格式是 ISO+单位名，它们将被记录为单一案例的缩写。如果这些单位格式是 ANS+单位名或者 L（局部的）+单位名，这些单位和源代码表必须被记录在案，除非有一种情况，就是定界符的构成部分能被更小的定界符代替。如，“1”代表公升，但是 pt&&ANS+就表示品脱（ANSI 单位）。在此，如果没有写明单位，默认的单位是毫升（ml）。

### 13.4.4.12 INV-12 Expiration date/time (TS) 01383 过期日期/时间

Definition: This field is the expiration date/time of the substance.定义：这一字段表示物质的过期日期/时间。

### 13.4.4.13 INV-13 First used date/time (TS) 01384 第一次使用日期/时间

Definition: This field is the time and date when the substance was first used. This date and time can be necessary to determine the stability of the substance.定义：这一字段表示物质被第一次使用的日期和时间。这个时间是确定物质的稳定性所必须的。

### 13.4.4.14 INV-14 On board stability duration (TQ) 01385 稳定使用的持续时间

Components: <quantity (CQ)> ^ <interval (CM)> ^ <duration (ST)> ^ <start date/time (TS)> ^ <end date/time (TS)> ^ <priority (ST)> ^ <condition (ST)> ^ <text (TX)> ^ <conjunction (ID)> ^ <order sequencing (CM)>

组件：<数量 (CQ)> ^ <时间间隔 (CM)> ^ <持续时间 (ST)> ^ <开始日期/时间 (TS)> ^ <结束日期/时间 (TS)> ^ <优先权 (ST)> ^ <条件 (ST)> ^ <文本 (TX)> ^ <关联 (ID)> ^ <命令次序 (CM)>

Definition: This field is the time duration that the substance is stable.定义：这一字段标示物质稳定的持续时间

### 13.4.4.15 INV-15 Test/fluid identifier(s) (CE) 01386 检验/流动标示符

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代编码系统名称(IS)>

Definition: This field is the list of tests and body fluid that apply to this substance. This is a repeating field. An empty field means that this substance is not test specific, i.e., it applies to all tests.定义：这一字段是应用这种物质来检验而得到体液清单。这是一个可重字段。空字段表示这种物质并不是特定实验才有的，也就是，所有实验中都有这种物质。

### 13.4.4.16 INV-16 Manufacturer lot number (ST) 01387 制造商标签号

Definition: This field specifies the lot number assigned by the manufacturer during production of the substance.定义：这一字段说明物质在生产期间由厂商分派的一个标签号码。

### 13.4.4.17 INV-17 Manufacturer Identifier (CE) 00286 制造商标示符

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代编码系统名称(IS)>

Definition: This field identifies the manufacturer of this substance. Refer to *User-defined Table 0385 – Manufacturer identifier* for suggested values.定义：这一字段是用于区别生产某钟物质的制造商。参见*用户自定义表 0385 – 制造商标示符*中列出的合法值。

User-defined Table 0385 – Manufacturer identifier

用户自定义表 0385 – 制造商标示符

| Value | Description |
|---|---|
| | No suggested value defined<br>没有建设的参考值 |

### 13.4.4.18 INV-18 Supplier identifier (CE) 01389 供应商标示符

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代编码系统名称(IS)>

Definition: This field identifies the supplier of this substance. Refer to User-defined Table 0386 – Supplier identifier for suggested values. 定义：这一字段是用于标示提供某钟物质的供应商。参见*用户自定义表 0386 – 供应商标示符*中列出的合法值。

User-defined Table 0386 – Supplier identifier

用户自定义表 0386 – 供应商标示符

| Value | Description |
|---|---|
| | No suggested value defined<br>没有定义好的参考值 |

## 13.4.5 ECD - equipment command segment 设备命令段

The equipment command segment contains the information required to notify the receiving component what is to happen.设备命令段中包含了通知接收组件将要发生什么所需要的信息。

HL7 Attribute Table – ECD – Equipment Command

HL7 属性表 – ECD – 设备命令段

| SEQ | LEN | DT | OPT | RP/# | TBL# | ITEM # | ELEMENT NAME |
|---|---|---|---|---|---|---|---|
| 1 | 20 | NM | R | | | 01390 | Reference Command Number 参考命令号 |
| 2 | 250 | CE | R | | 0368 | 01391 | Remote Control Command 远程控制命令 |
| 3 | 80 | ID | O | | 0136 | 01392 | Response Required 必要响应 |
| 4 | 200 | TQ | O | | | 01393 | Requested Completion Time 要求完成时间 |
| 5 | 65536 | ST | O | Y | | 01394 | Parameters 参量 |

### 13.4.5.0 ECD field definitions ECD 字段定义

### 13.4.5.1 ECD-1 Reference command number (NM) 01390 参考命令号

Definition: This field contains the unique identifier for this particular command that should be used by the various components for future referral to this command. It is similar to the concept of MSH-10 “Message control ID”, but at the equipment command/response level. This number is

generated by the originator of this command.定义：这一字段表示用于不同组件的特殊命令的唯一标示符。如同在 MSH-10 段中定义的“消息控制 ID”一样，但它处在设备命令或响应层。这个命令号码是由发起者定的。

### 13.4.5.2 ECD-2 Remote control command (CE) 01391 远程控制命令

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate
            identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system
            (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代
            编码系统名称(IS)>
```

Definition: This field identifies the command that the component is to initiate. Refer to *User-defined Table 0368 – Remote control command* for valid values. Refer to LECIS standard for details.定义：这个命令是用来组件初始化的。参见*用户自定义表 0368 – 远程控制命令*中列出的合法值。可以从 LECIS 标准中得到详细信息。

User-defined Table 0368 - Remote control command

用户自定义表 0368 – 远程控制命令

| Value | Description |
|---|---|
| SA | Sampling 取样 |
| LO | Load 上载 |
| UN | Unload 卸载 |
| LK | Lock 加锁 |
| UC | Unlock 解锁 |
| TT | Transport To 向外传送 |
| CN | Clear Notification 清空消息 |
| IN | Initialize/Initiate 初始化/发起 |
| SU | Setup 安装 |
| CL | Clear 清空 |
| PA | Pause 暂停 |
| RE | Resume 复位 |
| ES | Emergency –stop 紧急停止 |
| LC | Local Control Request 本地控制请求 |
| RC | Remote Control Request<br>远程控制请求 |
| AB | Abort 异常中断 |
| EN | Enable Sending Events 可以发送事件 |
| DI | Disable Sending Events 不能发送事件 |
| EX | Execute (command specified in field Parameters (ST) 01394)<br>执行（将在参量(ST)字段中详细说明） |

### 13.4.5.3 ECD-3 Response required (ID) 01392 必要响应

Definition: This field identifies the mode of synchronization that is to be used in relation to the execution of the command. "Y" (Yes) means that the response is required immediately after execution, "N" (No) response is not required at all. Refer to *HL7 Table 0136 – Yes/no indicator* for valid values.定义：这一字段标示命令执行完成之后，是否需要立刻响应相关联的同步命令。"Y"（是的）意味着执行命令之后立刻响应，"N"（不是）意思是不用立刻响应。参见 *HL7 表 0136 – 是/不是指示器*中列出的合法值。

### 13.4.5.4 ECD-4 Requested completion time (TQ) 01393 要求完成时间

```
Components:  <quantity (CQ)> ^ <interval (CM)> ^ <duration (ST)> ^ <start date/time (TS)>
             ^ <end date/time (TS)> ^ <priority (ST)> ^ <condition (ST)> ^ <text (TX)> ^
             <conjunction (ID)> ^ <order sequencing (CM)>

组件：<数量 (CQ)> ^ <时间间隔 (CM)> ^ <持续时间 (ST)> ^ <开始日期/时间 (TS)> ^ <结束日期/时间
          (TS)> ^ <优先权 (ST)> ^ <条件 (ST)> ^ <文本 (TX)> ^ <关联 (ID)> ^ <命令次序 (CM)>
```

Definition: This field identifies when the remote control action must be completed. The devices managed in the LAS should have synchronized time (use original HL7 message NMQ, NMD with "System Clock Segment" NCK). If relative time quantity is used, then the referenced time is the time transferred in the EQU segment.定义：这一字段定义了远程控制活动必须在何时完成。在 LAS 中控制的设备应该有同步时间（在老版本 HL7 的 NMQ，带有系统时钟段的 NMD 以及 NCK 消息中使用）。在 EQU 段中，如果设定的关联时间用完了，那么参考时间就会被启动。

### 13.4.5.5 ECD-5 Parameters (ST) 01394 参量

Definition: This field identifies the parameters of the command (if they are not included in separate segment[s]). 定义：这一字段定义了命令的参数（假如参数没有包括在分离段中）。

| | |
|---|---|
| **Note:** | Elements of this segment (or other elements not defined here) may be required for certain vendor-specific equipment such as centrifuges, aliquoters, sorters, uncappers, recappers, automated storage units, etc. |
| **注意：** | 这个段的元素（或者在此没被定义的其他元素）是为了买商指定设备而定的，例如离心分离机、分样器、样本分类器、取盖器、盖盖器、自动存储设备等。 |

## 13.4.6 ECR - equipment command response segment 设备命令响应段

The equipment command response segment contains the receiving component's response to the previously received command. 设备命令响应段包括接收组件对预先收到命令的响应。

HL7 Attribute Table – ECR – Equipment Command Response

HL7 属性表 – ECR –设备命令响应

| SEQ | LEN | DT | OPT | RP/# | TBL# | ITEM # | ELEMENT NAME |
|---|---|---|---|---|---|---|---|
| 1 | 250 | CE | R | | 0387 | 01395 | Command Response 命令响应 |
| 2 | 26 | TS | R | | | 01396 | Date/Time Completed 完成时间 |
| 3 | 65536 | ST | O | Y | | 01397 | Command Response Parameters 命令响应参量 |

### 13.4.6.0 ECR field definitions 字段定义

### 13.4.6.1 ECR-1 Command response (CE) 01395 命令响应

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate
            identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system
            (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代
            编码系统名称(IS)>
```

Definition: This field identifies the response of the previously issued command. Refer *to User-defined Table 0387 – Command response* for valid values.定义：这一字段定义了对预先发出命令的响应。参见*用户自定义表 0387 –命令响应*中列出的合法值。

User-defined Table 0387 - Command response

用户自定义表 0387 –命令响应

| Value | Description |
|---|---|
| OK | Command completed successfully 命令成功完成 |
| TI | Command cannot be completed within requested completion time<br>命令没有在规定时间中完成 |
| ER | Command cannot be completed because of error condition (see response parameters)<br>由于错误条件导致命令不能完成（参见响应参量） |
| ST | Command cannot be completed because of the status of the requested equipment<br>由于被请求的设备状态导致命令不能完成 |
| UN | Command cannot be completed for unknown reasons 未知原因导致命令不能完成 |

### 13.4.6.2 ECR-2 Date/time completed 错误！未定义书签。 (TS) 01396 完成时间

Definition: This field contains the date and time that the receiving component completed the requested command.定义：这一字段包含了接收组件完成被请求命令的时间。

### 13.4.6.3 ECR-3 Command response parameters (ST) 01397 命令响应参量

Definition: This field identifies any associated parameters that relate to the returned response command message.定义：这一字段定义任何与响应命令返回的相关信息。

## 13.4.7 NDS - notification detail segment 公告细节段

The equipment notification detail segment is the data necessary to maintain an adequate audit trail as well as notifications of events, (e.g., alarms that have occurred on a particular piece of equipment.设备公告细节段与事件公告一样是作为维护 核查的必要数据，例如，从一个特殊设备上发出的警报。

HL7 Attribute Table – NDS – Notification Detail

HL7 属性表 – NDS – 公告细节

| SEQ | LEN | DT | OPT | RP/# | TBL# | ITEM # | ELEMENT NAME |
|---|---|---|---|---|---|---|---|
| 1 | 20 | NM | R | | | 01398 | Notification Reference Number 公告参考码 |
| 2 | 26 | TS | R | | | 01399 | Notification Date/Time 公告日期/时间 |
| 3 | 250 | CE | R | | 0367 | 01400 | Notification Alert Severity 重要的警告性公告 |
| 4 | 250 | CE | R | | | 01401 | Notification Code 公告编码 |

## 13.4.7.0 NDS field definitions 字段定义

### 13.4.7.1 NDS-1 Notification reference number (NM) 01398 公告参考码

Definition: This field contains a unique sequential reference number that may be used by various components to refer to this transaction. This number is generated by the originator of this notification.定义：这一字段包括了用于指向事务不同组件的唯一连续的参考码。这一编码通常是由公告的发起者定的。

### 13.4.7.2 NDS-2 Notification date/time (TS) 01399 公告日期/时间

Definition: This field is the date/time of the notifications.定义：这一字段定义了公告的时间。

### 13.4.7.3 NDS-3 Notification alert severity (CE) 01400 重要的警告性公告

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate
            identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system
            (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代
            编码系统名称(IS)>
```

Definition: The severity of the specific notification. Refer to *HL7 Table 0367 - Alert level* for valid entries.定义：指定公告的严肃性。参见 *HL7 表 0367 –警告级别*列出的合法入口

### 13.4.7.4 NDS-4 Notification code (CE) 01401 公告编码

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate
            identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system
            (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代
            编码系统名称(IS)>
```

Definition: This field contains information about the type of notification being sent. These are manufacturer and equipment specific error or status codes, e.g., AQN0123 – aliquoting error – clot detected.定义：这一字段包含了公告开始送出时关于公告类型的信息。这些编码是由制造厂商编写的关于设备指定的错误码或者状态码，例如，AQN0123 – 整除错误 – 发现凝块。

## 13.4.8 CNS – clear notification segment 清空公告段

The clear equipment notification segment contains the data necessary to allow the receiving equipment to clear any associated notifications. 清除公告段包括了允许接收设备用来清空任何相关公告信息的必要数据。

HL7 Attribute Table – CNS – Clear Notification

HL7 属性表 – CNS – 清空公告

| SEQ | LEN | DT | OPT | RP/# | TBL# | ITEM # | ELEMENT NAME |
|---|---|---|---|---|---|---|---|
| 1 | 20 | NM | O | | | 01402 | Starting Notification Reference Number<br>起始的公告参考码 |
| 2 | 20 | NM | O | | | 01403 | Ending Notification Reference Number<br>结束的公告参考码 |
| 3 | 26 | TS | O | | | 01404 | Starting Notification Date/Time<br>起始公告日期/时间 |
| 4 | 26 | TS | O | | | 01405 | Ending Notification Date/Time<br>结束公告日期/时间 |
| 5 | 250 | CE | O | | | 01406 | Starting Notification Code<br>起始公告编码 |
| 6 | 250 | CE | O | | | 01407 | Ending Notification Code<br>结束公告编码 |

### 13.4.8.0 CNS field definitions 定义字段

### 13.4.8.1 CNS-1 Starting notification reference number (NM) 01402 起始的公告参考码

Definition: This field contains the starting notification reference number that is to be cleared.定义：这一字段定义了将要被清空的起始公告参考码。

### 13.4.8.2 CNS-2 Ending notification reference number (NM) 01403 结束的公告参考码

Definition: This field contains the ending notification reference number that is to be cleared. If empty, then only notification with Starting Notification Reference Number will be cleared. 定义：这一字段定义了将要被清空的结束公告参考码。假如这一字段为空，那么只有起始公告参考码会被清空。

### 13.4.8.3 CNS-3 Starting notification date/time (TS) 01404 起始公告日期/时间

Definition: This field is the starting date/time of the notifications to be cleared. If this field is empty but Ending Notification Date/Time is filled, then all notifications before Ending Notification Date/Time will be cleared.定义：这一字段定义了开始清空公告的时间。假如这一字段为空，但是结束公告时间已经到了，那么所有公告将在结束公告时间之前被清空。

### 13.4.8.4 CNS-4 Ending notification date/time (TS) 01405 结束公告日期/时间

Definition: This field is the ending date/time of the notifications to be cleared. If this field is empty but Starting Notification Date/Time is filled, then all notifications after Starting Notification

Date/Time will be cleared.定义：这一字段定义了结束清空公告的时间。假如这一字段为空，但是开始公告时间已经到了，那么所有公告将在开始公告时间之前被清空。

### 13.4.8.5 CNS-5 Starting notification code (CE) 01406 起始公告编码

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代编码系统名称(IS)>

Definition: This field contains the starting notification code that is to be cleared (see 13.4.7.4 NDS-4 Notification code (CE) 01401).定义：这一字段定义了将要被清空的起始公告编码（参见 13.4.7.4 NDS-4 Notification code (CE) 01401）。

### 13.4.8.6 CNS-6 Ending notification code (CE) 01407 结束公告编码

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代编码系统名称(IS)>

Definition: This field contains the ending notification code that is to be cleared (see 13.4.7.4 NDS-4 Notification code (CE) 01401). If empty, then only notification with Starting Notification Code will be cleared.定义：这一字段定义了将要被清空的结束公告编码（参见 13.4.7.4 NDS-4 Notification code (CE) 01401）。

## 13.4.9 TCC - test code configuration segment 检验编码配置段

The test (e.g., analyte) code configuration segment is the data necessary to maintain and transmit information concerning the test entity codes that are being used throughout the "automated system."检验（例如分析检验）编码段包含了贯穿于整个自动化系统用来维护和传输检验实体编码信息的必要数据。

HL7 Attribute Table – TCC – Test Code Configuration

HL7 属性表 – TCC – 检验编码配置

| SEQ | LEN | DT | OPT | RP/# | TBL# | ITEM # | ELEMENT NAME |
|---|---|---|---|---|---|---|---|
| 1 | 250 | CE | R | | | 00238 | Universal Service Identifier 通用服务标示符 |
| 2 | 80 | EI | R | | | 01408 | Test Application Identifier 检验应用标示符 |
| 3 | 300 | CM | O | | 0070/ 0163/ 0369 | 00249 | Specimen Source 标本源 |
| 4 | 20 | SN | O | | | 01410 | Auto-Dilution Factor Default 默认自动-稀释要素 |
| 5 | 20 | SN | O | | | 01411 | Rerun Dilution Factor Default 默认再运行稀释要素 |
| 6 | 20 | SN | O | | | 01412 | Pre-Dilution Factor Default 默认预先-稀释要素 |
| 7 | 20 | SN | O | | | 01413 | Endogenous Content of Pre-Dilution Diluent 预稀释的稀释物内生容量 |
| 8 | 10 | NM | O | | | 01414 | Inventory Limits Warning Level |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | 存货清单限制警告层 |
| 9 | 1 | ID | O | | 0136 | 01415 | Automatic Rerun Allowed 允许自动再运行 |
| 10 | 1 | ID | O | | 0136 | 01416 | Automatic Repeat Allowed 允许自动重复 |
| 11 | 1 | ID | O | | 0136 | 01417 | Automatic Reflex Allowed 允许自动反测试 |
| 12 | 20 | SN | O | | | 01418 | Equipment Dynamic Range 设备动态范围 |
| 13 | 250 | CE | O | | | 00574 | Units 单位 |
| 14 | 250 | CE | O | | 0388 | 01419 | Processing Type 处理类型 |

## 13.4.9.0 TCC field definitions 字段定义

## 13.4.9.1 TCC-1 Universal service Identifier (CE) 00238 通用服务标示符

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate
            identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system
            (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代
            编码系统名称(IS)>
```

Definition: This field identifies the test code that information is being transmitted about. The alternate elements represent the test code identifier that has been assigned by the manufacturer to this particular test code.定义：这一字段定义了关于将要被传输信息的检验码。交替元素代表检验编码标示符，它是由制造厂商分配的特殊检验编码。

## 13.4.9.2 TCC-2 Equipment test application identifier (EI) 01408 设备检验应用标示符

```
Components: <entity identifier (ST)> ^ <namespace ID (IS)> ^ <universal ID (ST)> ^
            <universal ID type (ID)>

组成：<实体标识符 (ST)> ^ <命名空间 ID (IS)> ^ <全局 ID(ST)> ^ <全局 ID 类型 (ID)
```

Definition: This field identifies the test application code assigned by the manufacturer of the equipment or reagents and associated with performing of the particular test specified by the Universal Test Identifier.定义：这一字段定义了由设备或试剂的厂商分配的检验应用编码 与由通用检验标示符指定的特殊检验相关

## 13.4.9.3 TCC-3 Specimen source (CM) 00249 标本源

```
Components:  <specimen source name or code (CE)> ^ <additives (TX)> ^ <freetext (TX)> ^
             <body site (CE)> ^ <site modifier (CE)> ^ <collection method modifier code
             (CE)> ^ <specimen role (CE)>

组成：<标本源名称或编码 (CE)> ^ <附加剂 (TX)> ^ <自由文本 (TX)> ^ <采集部位 (CE)> ^ <部位的定语
             (CE)> ^ <采集方法定语编码 (CE)> ^ <标本角色 (CE)>

Subcomponents of specimen source name or code:  <identifier (ST)> & <test (ST)> & <name
             of coding system (IS)> & <alternate identifier (ST)> & <alternate text (ST)>
             & <name of alternate coding system (ST)>

标本源名称或编码的子组成：  <标识符 (ST)> & <检验 (ST)> & <译码系统名 (IS)> & <替代标识符 (ST)> & <
             替代文本 (ST)> & <替代系统编码系统名称 (ST)>

Subcomponents of body site:  <identifier (ST)> & <test (ST)> & <name of coding system
             (IS)> & <alternate identifier (ST)> & <alternate text (ST)> & <name of
             alternate coding system (ST)>

采集部位的子组成：  <标识符 (ST)> & <检验 (ST)> & <译码系统名 (IS)> & <替代标识符 (ST)> & <替代文本
             (ST)> & <替代系统编码系统名称 (ST)>
```

```
Subcomponents of site modifier:  <identifier (ST)> & <test (ST)> & <name of coding system
            (IS)> & <alternate identifier (ST)> & <alternate text (ST)> & <name of
            alternate coding system (ST)>

部位定语的子组成：  <标识符 (ST)> & <检验 (ST)> & <译码系统名 (IS)> & <替代标识符 (ST)> & <替代文本
            (ST)> & <替代系统编码系统名称 (ST)>

Subcomponents of collection method modifier code:  <identifier (ST)> & <test (ST)> &
            <name of coding system (IS)> & <alternate identifier (ST)> & <alternate text
            (ST)> & <name of alternate coding system (ST)>

采集方法定语编码的子组成：  <标识符 (ST)> & <检验 (ST)> & <译码系统名 (IS)> & <替代标识符 (ST)> & <
            替代文本 (ST)> & <替代系统编码系统名称 (ST)>

Subcomponents of specimen role: <identifier (ST)> & <test (ST)> & <name of coding system
            (IS)> & <alternate identifier (ST)> & <alternate text (ST)> & <name of
            alternate coding system (ST)>

标本角色的子组成：  <标识符 (ST)> & <检验 (ST)> & <译码系统名 (IS)> & <替代标识符 (ST)> & <替代文本
            (ST)> & <替代系统编码系统名称 (ST)>
```

Definition: This field is the site where the specimen should be obtained or where the service should be performed. 定义：这一字段表示标本采集或服务实施的部位。

The first component contains the specimen source name or code (as a CE data type component). (Even in the case of observations whose name implies the source, a source may be required (e.g., blood culture: heart blood.) Refer to *HL7 Table 0070 - Source of specimen* for valid entries.第一部分包含了标本源的名称或编码（就象 CE 数据类型组件）。（甚至通过观察标本的名称就可以得出标本源的由来，标本源被提供的部位（例如，心脏血培养。））参见 *HL7 表 0070 – 标本源*列出的合法入口。

The second component should include free text additives to the specimen such as heparin, EDTA, or oxalate, when applicable. 第二个部分包括了空白添加剂，例如肝素，EDTA，或草酸盐，如果标本中允许添加这些试剂的话。

The third is a free text component describing the method of collection when that information is a part of the order. When the method of collection is logically an observation result, it should be included as a result segment.第三部分是由自由文本组成，描述了信息是医嘱的一部分时采集的方法。当采集方法逻辑上是一种观察结果时，采集方法也应被包含在结果段中。

The fourth component specifies the body site from which the specimen was obtained, and the fifth is the site modifier. For example, the site could be antecubital fossa, and the site modifier "right." The components of the CE fields become sub-components. Refer to *HL7 Table 0163 - Administrative site* for valid entries.第四部分描述了标本是从身体的哪一部位采集的。第五部分为部位的定语。例如，部位为前尺骨沟，部位的定语为“右”。 CE 字段的这一部分可以扩展成为一个子组成。参见 *HL7 表 0163 – 管理部位*来得到合法的值。

The sixth component indicates whether the specimen is frozen as part of the collection method. Suggested values are F (Frozen); R (Refrigerated). If the component is blank, the specimen is assumed to be at room temperature.第六部分指出标本在采集过程中是否被冷冻。建议值为 F（冷冻）、R（冷藏）。如果这一部分为空，则暗示标本是在室温中处理的。

The 7th component indicates the role of the sample. Refer to *User-defined Table 0369 – Specimen role*第七个组件指出了样本的角色。参见 *用户自定义表 0369 – 标本角色*。

### 13.4.9.4 TCC-4 Auto-dilution factor default (SN) 01410 默认自动-稀释要素

```
Components:  <comparator (ST)> ^ <num1 (NM)> ^ <separator/suffix (ST)> ^ <num2 (NM)>
```

组件：<比较仪 (ST)> ^ <数字 1 (NM)> ^ <离析器/下标 (ST)> ^ <数字 2 (NM)>

Definition: This field is the value that is to be used as the default factor for automatically diluting a specimen by an instrument for this particular test code. (See examples in definition of "Dilution factor" in the "Specimen and Container Detail Segment".)定义：对于这种特殊检验码，这一字段是作为通过仪器自动稀释标本的一个默认要素值。（可以参考"标本和容器细节段"中"稀释要素"的定义。）

### 13.4.9.5 TCC-5 Rerun dilution factor default (SN) 01411 默认再运行稀释要素

Components: <comparator (ST)> ^ <num1 (NM)> ^ <separator/suffix (ST)> ^ <num2 (NM)>

组件：<比较仪 (ST)> ^ <数字 1 (NM)> ^ <离析器/下标 (ST)> ^ <数字 2 (NM)>

Definition: This field is the value that is to be used as the default factor for automatically diluting a specimen in case of rerun for this particular test code.定义：对于这种特殊检验码，这一字段是作为在再运行情况下，自动稀释标本的一个默认要素值。

### 13.4.9.6 TCC-6 Pre-dilution factor default (SN) 01412 默认预先-稀释要素

Components: <comparator (ST)> ^ <num1 (NM)> ^ <separator/suffix (ST)> ^ <num2 (NM)>

组件：<比较仪 (ST)> ^ <数字 1 (NM)> ^ <离析器/下标 (ST)> ^ <数字 2 (NM)>

Definition: This field is the value that is to be used as the default factor for a specimen that is delivered to the laboratory automation system as pre-diluted for this particular test code.定义：对于这种特殊检验码，这一字段作为标本传送到实验室自动化系统，是否预先稀释的一个默认要素值。

### 13.4.9.7 TCC-7 Endogenous content of pre-dilution diluent (SN) 01413 预稀释的稀释物内生容量

Definition: This field represents a baseline value for the measured test that is inherently contained in the diluent. In the calculation of the actual result for the measured test, this baseline value is normally considered. 定义：这一字段代表着作为标准检验中，包含在稀释物中固有的一个基线值。为了标准检验，在实际结果的计算中，这个基线值通常是被考虑的。

### 13.4.9.8 TCC-8 Inventory limits warning level (NM) 01414 存货清单限制警告层

Definition: This field is the value that is to be used as the threshold for initiating inventory warning-level messages.定义：这一字段是用来开始发出存货警告层消息的极限值。

### 13.4.9.9 TCC-9 Automatic rerun allowed (ID) 01415 允许自动再运行

Definition: This field identifies whether or not automatic reruns are to be initiated on specimens for this particular test code. Refer to *HL7 Table 0136 - Yes/no indicator* for valid values.定义：对于这种特殊检验码，这一字段是决定标本是否自动再运行的标志。参见 *HL7 表 0136 – 是/不是指示器*中列出的合法值。

### 13.4.9.10 TCC-10 Automatic repeat allowed (ID) 01416 允许自动重复

Definition: This field identifies whether or not automatic repeat testing is to be initiated on specimens for this particular test code. Refer to *HL7 Table 0136 - Yes/no indicator* for valid values. 定义：对于这种特殊检验码，这一字段是决定标本是否将要开始自动重复测试的标志。参见 *HL7 表 0136 – 是/不是指示器*中列出的合法值。

### 13.4.9.11 TCC-11 Automatic reflex allowed (ID) 01417 允许自动反测试

Definition: This field identifies whether or not automatic or manual reflex testing is to be initiated on specimens for this particular test code. Refer to *HL7 Table 0136 - Yes/no indicator* for valid values. 定义：对于这种特殊检验码，这一字段是决定标本是否将要开始进行自动或手工相反测试的标志。参见 *HL7 表 0136 – 是/不是指示器*中列出的合法值。

### 13.4.9.12 TCC-12 Equipment dynamic range (SN) 01418 设备动态范围

Components: <comparator (ST)> ^ <num1 (NM)> ^ <separator/suffix (ST)> ^ <num2 (NM)>

组件：<比较仪 (ST)> ^ <数字 1 (NM)> ^ <离析器/下标 (ST)> ^ <数字 2 (NM)>

Definition: This is the range over which the equipment can produce results. 定义：设备能够产生结果的范围。

### 13.4.9.13 TCC-13 Units (CE) 00574 单位

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代编码系统名称(IS)>

Definition: This field is the units that have a data type of CE. The default coding system for the units codes consists of the ISO+ abbreviation for a single case unit (ISO 2955- 83) plus extensions, that do not collide with ISO abbreviations (see Section 4.1). We designate this coding system as ISO+. Both the ISO unit's abbreviations and the extensions are defined in Section TBD," and listed in Figure 7-13. The ISO+ abbreviations are the codes for the default coding system. Consequently, when ISO+ units are being used, only ISO+ abbreviations need be sent, and the contents of the units field will be backward compatible to HL7 Version 2.1. For more information on this field see reference Chapter 7, Section 7.4.2.6.定义：这一字段是 CE 数据类型的单位。作为单位编码的默认译码系统由 ISO+缩写词组成，为单一情况单位（ISO 2955-83）加上扩展名，这样不会与 ISO 缩写词冲突（见 4.1 节）。我们指定这个译码系统为 ISO+。ISO+缩写词是作为默认译码系统的编码。因此，当 ISO+单位被用时，仅仅 ISO+缩写词需要被传送，并且单位字段的内容将是向后兼容 HL7 2.1 版本的。关于这一字段更多的资料，可以参见第 7 章，7.4.2.6 节。

These units apply to fields "Endogenous content of pre-dilution diluent" and "Equipment dynamic range".这些单位都是应用在“ ”和“设备动态范围”字段中的。

### 13.4.9.14 TCC-14 Processing type (CE) 01419 处理类型

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代编码系统名称(IS)>

Definition: This field identifies the processing type that applies to this test code. If this attribute is omitted, then regular production is the default. Refer to *HL7 Table 0388 – Processing type* for valid values.定义：这一字段定义了应用在这一检验码中的处理类型。假如这个属性被忽略，那么合格产品就是默认类型。参见 *HL7 表 0388 – 处理类型* 中列出的合法值。

HL7 Table 0388 - Processing type

HL7 表 0388 – 处理类型

| Value | Description |
|---|---|
| P | Regular Production 合格产品 |
| E | Evaluation 评价 |

## 13.4.10 TCD - test code detail segment 检验编码细节段

The test code detail segment contains the data necessary to perform operations or calculations, or execute decisions by the laboratory automation system, and which are not supported by the original HL7 segments related to orders (ORC, OBR). For detail of use see messages of laboratory orders and observations in chapters 4 and 7. 检验编码细节段包含了通过实验室自动化系统执行实施或计算，或者执行结果的必要数据，这并不支持原始的 HL7 段叙述的规则（ORC，OBR）。关于实验室规则和观察资料的详细信息在第 4 章和第 7 章中。

HL7 Attribute Table – TCD – Test Code Detail

HL7 属性表 – TCD – 检验编码细节

| SEQ | LEN | DT | OPT | RP/# | TBL# | ITEM # | ELEMENT NAME |
|---|---|---|---|---|---|---|---|
| 1 | 250 | CE | R | | | 00238 | Universal Service Identifier 通用服务标示符 |
| 2 | 20 | SN | O | | | 01420 | Auto-Dilution Factor 自动稀释要素 |
| 3 | 20 | SN | O | | | 01421 | Rerun Dilution Factor 再运行稀释要素 |
| 4 | 20 | SN | O | | | 01422 | Pre-Dilution Factor 预先稀释要素 |
| 5 | 20 | SN | O | | | 01413 | Endogenous Content of Pre-Dilution Diluent 预稀释的稀释物内生容量 |
| 6 | 1 | ID | O | | 0136 | 01416 | Automatic Repeat Allowed 允许自动重复 |
| 7 | 1 | ID | O | | 0136 | 01424 | Reflex Allowed 允许反测试 |
| 8 | 250 | CE | O | | 0389 | 01425 | Analyte Repeat Status 分析重复状态 |

### 13.4.10.0 TCD field definitions 字段定义

### 13.4.10.1 TCD-1 Universal service Identifier (CE) 00238 通用服务标示符

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代编码系统名称(IS)>

Definition: This field identifies the test code that information is being transmitted about. 定义：这一字段定义了关于将要被传输信息的检验码。

### 13.4.10.2 TCD-2 Auto-dilution factor (SN) 01420 自动稀释要素

Components: <comparator (ST)> ^ <num1 (NM)> ^ <separator/suffix (ST)> ^ <num2 (NM)>

组件：<比较仪 (ST)> ^ <数字 1 (NM)> ^ <离析器/下标 (ST)> ^ <数字 2 (NM)>

Definition: This field is the value that is to be used as the factor for automatically diluting a particular specimen by an instrument for this particular test code. (See examples in definition of "Dilution factor" in the "Specimen and Container Detail Segment".) 定义：对于这种特殊检验码，这一字段是作为通过仪器自动稀释标本的要素值。（可以参考"标本和容器细节段"中"稀释要素"的定义。）

### 13.4.10.3 TCD-3 Rerun dilution factor (SN) 01421 再运行稀释要素

Components: <comparator (ST)> ^ <num1 (NM)> ^ <separator/suffix (ST)> ^ <num2 (NM)>

组件：<比较仪 (ST)> ^ <数字 1 (NM)> ^ <离析器/下标 (ST)> ^ <数字 2 (NM)>

Definition: This field is the value that is to be used as the factor for automatically diluting a particular specimen in case of rerun for this particular test code. 定义：对于这种特殊检验码，这一字段是作为在再运行情况下，自动稀释标本的要素值。

### 13.4.10.4 TCD-4 Pre-dilution factor (SN) 01422 预先稀释要素

Components: <comparator (ST)> ^ <num1 (NM)> ^ <separator/suffix (ST)> ^ <num2 (NM)>

组件：<比较仪 (ST)> ^ <数字 1 (NM)> ^ <离析器/下标 (ST)> ^ <数字 2 (NM)>

Definition: This field is the value that is to be used as the factor for a particular specimen that is delivered to the automated system as pre-diluted for this particular test code. 定义：对于这种特殊检验码，这一字段作为标本传送到实验室自动化系统，是否预先稀释的要素值。

### 13.4.10.5 TCD-5 Endogenous content of pre-dilution diluent (SN) 01413 预稀释的稀释物内生容量

Components: <comparator (ST)> ^ <num1 (NM)> ^ <separator/suffix (ST)> ^ <num2 (NM)>

组件：<比较仪 (ST)> ^ <数字 1 (NM)> ^ <离析器/下标 (ST)> ^ <数字 2 (NM)>

Definition: This field represents the rest concentration of the measured test in the diluent. It is the value that is to be used for calculation of the concentration of pre-diluted specimens for this particular test code. 定义：这一字段代表着在稀释物中标准检验的静止浓度。对于这种特殊检验码，静止浓度是被用来预先稀释标本浓度计算的值。

### 13.4.10.6 TCD-6 Automatic repeat allowed (ID) 01416 允许自动重复

Definition: This field identifies whether or not automatic repeats are to be initiated for this particular specimen for this particular test code. Refer to *HL7 Table 0136 -Yes/no indicator* for valid values.对于这种特殊检验码，这一字段是决定特殊标本是否将要开始自动重复的标志。参见 *HL7 表 0136 – 是/不是指示器*中列出的合法值。

### 13.4.10.7 TCD-7 Reflex allowed (ID) 01424 允许反测试

Definition: This field identifies whether or not automatic or manual reflex testing is to be initiated for this particular specimen. Refer *to HL7 Table 0136 -Yes/no indicator* for valid values.定义：这一字段决定了特殊标本是否允许被自动或手工的反测试。

### 13.4.10.8 TCD-8 Analyte repeat status (CE) 01425 分析重复状态

```
Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate
            identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system
            (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代
            编码系统名称(IS)>
```

Definition: This field identifies the repeat status for the analyte/result (e.g. original, rerun, repeat, reflex). Refer to *HL7 Table 0389 – Analyte repeat status* for valid values.定义：这一字段是为了分析或结果定义的重复状态（如，原始的、再运行、重复、反向测试）。参见 *HL7 表 0389 – 分析重复状态* 中列出的合法值。

For purpose of this chapter we assume the following:下面是我们列出了这章的意图：

Repeated test without dilution — performed usually to confirm correctness of results (e.g., in case of results flagged as "Panic" or mechanical failures).没有稀释物的重复检验——被执行的目的通常是用来确认结果的正确性（如，结果标记为"没有理由"或由于机械导致失败的情况）。

Repeated test with dilution — performed usually in the case the original result exceeded the measurement range (technical limits).有稀释物的重复检验——被执行的目的通常是由于原始结果超出了测量范围的情况下（由于技术上的限制）。

Reflex test — this test is performed as the consequence of rules triggered based on other test result(s).反向检验——这项检验的执行是作为在另外的一个（或一些）结果的基础上引发出的有规律性的推理。

HL7 Table 0389 - Analyte repeat status

HL7 表 0389 – 分析重复状态

| Value | Description |
|---|---|
| O | Original, first run 原始，第一次运行 |
| R | Repeated without dilution 没有稀释物的重复 |
| D | Repeated with dilution 带有稀释物的重复 |
| F | Reflex test 反向检验 |

## 13.4.11 SID – substance identifier segment 物质标示符段

The Substance Identifier segment contains data necessary to identify the substance (e.g., reagents) used in the production of analytical test results. The combination of these fields must uniquely identify the substance, i.e., depending on the manufacturer all or some fields are required (this is the reason the optionality is 'C' (conditional)). If the analysis requires multiple substances, this segment is repeated for each substance. The segment(s) should be attached to the TCD segment.

物质标示符段包含了用来区别在分析检验结果的产品中物质的必要数据。这些字段的组合用来区分物质，必须是唯一的，也就是说，被需要的所有或者部分字段是依赖于制造商的（这就是选择性是‘C’（有条件的）的原因）。假如分析要求多重物质，这个段对于每一种物质来说都是重复的。这个（些）段应该被绑定到 TCD 段中。

Another purpose of this segment is to transfer the control manufacturer, lot, etc. information for control specimens. In this case the SID segment should be attached to the SAC segment describing the container with the control specimen.这个段的另外一个目的就是改变支配厂商，分割开来等等，为了控制标本的信息。在这种情况下，SID 段应该被绑定在 SAC 段上用来描述带有控制标本的容器。

HL7 Attribute Table – SID – Substance Identifier

HL7 属性表 – SID – 物质标示符

| SEQ | LEN | DT | OPT | RP/# | TBL# | ITEM # | ELEMENT NAME |
|---|---|---|---|---|---|---|---|
| 1 | 250 | CE | C | | | 01426 | Application / Method Identifier<br>应用/方法标示符 |
| 2 | 20 | ST | C | | | 01129 | Substance Lot Number 物质标签号 |
| 3 | 200 | ST | C | | | 01428 | Substance Container Identifier<br>物质容器标示符 |
| 4 | 250 | CE | C | | 0385 | 01429 | Substance Manufacturer Identifier<br>物质厂商标示符 |

### 13.4.11.0 SID field definitions 字段定义

### 13.4.11.1 SID-1 Application / method identifier (CE) 01426 应用/方法标示符

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代编码系统名称(IS)>

Definition: This field identifies the application / method used for the analysis. 定义：这一字段定义了用于分析的应用或方法。

Example: GLUCOSE is an orderable test. GLUCOSE can be analyzed using various applications / methods, which have manufacturer specific identifiers. 例子：葡萄糖是一种有顺序的检验。葡萄糖可以用多种不同的由厂商指定的标示符来分析应用或方法。

### 13.4.11.2 SID-2 Substance lot number (ST) 01129 物质标签号

Definition: This field specifies the lot number assigned by the manufacturer during production of the substance.定义：这一字段指定了物质在生产期间由厂商分配的系列号码。

### 13.4.11.3 SID-3 Substance container identifier (ST) 01428 物质容器标示符

Definition: This field specifies the container assigned by the manufacturer during production of the substance. This identifier should be unique within specific lot of specific application / method. 定义：这一字段指定了物质在生产期间由厂商分配的盛放容器。这个标示符在指定的特殊应用/方法是唯一的。

### 13.4.11.4 SID-4 Substance manufacturer identifier (CE) 01429 物质厂商标示符

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代编码系统名称(IS)>

Definition: This field identifies the manufacturer of this substance. Refer to *User-defined Table 0451 - Manufacturer identifier* for suggested values.定义：这一字段定义了物质的生产厂商。参见 *用户自定义表 0451 – 生产厂商标示符* 中列出的建议值。

## 13.4.12 EQP - equipment log/service segment 设备日志/服务段

The equipment log/service segment is the data necessary to maintain an adequate audit trail of events that have occurred on a particular piece of equipment. 设备日志/服务段包含了足够多的用于维护发生在特殊设备核算踪迹事件特殊段的必要数据。

HL7 Attribute Table – EQP – Equipment/log Service

| SEQ | LEN | DT | OPT | RP/# | TBL# | ITEM # | ELEMENT NAME |
|---|---|---|---|---|---|---|---|
| 1 | 250 | CE | R | | 0450 | 01430 | Event type 事件类型 |
| 2 | 20 | ST | O | | | 01431 | File Name 文件名 |
| 3 | 26 | TS | R | | | 01202 | Start Date/Time 开始时间 |
| 4 | 26 | TS | O | | | 01432 | End Date/Time 结束时间 |
| 5 | 65536 | FT | R | | | 01433 | Transaction Data 事务数据 |

### 13.4.12.0 EQP field definitions 字段定义

### 13.4.12.1 EQP-1 Event type (CE) 01430 事件类型

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (IS)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (IS)>

组成：<标识符 (ST)> ^ <文本 (ST)> ^ <编码系统名称(IS)> ^ <替代标识符(ST)> ^ <替代文本(ST)> ^ <替代编码系统名称(IS)>

Definition: This field identifies the type of event of the message. Refer to *HL7 Table 0450 – Event type* for valid values.定义：这一字段定义了消息事件的类型。参照 *HL7 表 0450 – 事件类型* 中列出的有效值。

HL7 Table 0450-Event type

HL7 表 0450-事件类型

| Value | Description |
|---|---|
| LOG | Log Event 日志事件 |
| SER | Service Event 服务事件 |

#### 13.4.12.2 EQP-2 File name (ST) 01431 文件名

Definition: This field is the physical file name that is being used to store information about the transmitted log and/or service event.定义：这一字段是用来存储关于传输日志和服务事件的信息文件的物理名称。

#### 13.4.12.3 EQP-3 Start date/time (TS) 01202 开始时间

Definition: This field is the date/time that the event started.定义：这一字段定义了事件开始的时间。

#### 13.4.12.4 EQP-4 End date/time (TS) 01432 结束时间

Definition: This field is the date/time that the event was completed. 定义：这一字段定义了事件结束的时间

#### 13.4.12.5 EQP-5 Transaction data (FT) 01433 事务数据

Definition: This field is the data that the log and/or service event was about and is to be logged.定义：这一字段是日志或关于服务事件中被登记的数据。

## 13.5 NOTES REGARDING USAGE 关于使用中的注意事项

### 13.5.1 Other required original HL7 messages 原始 HL7 消息其他要求

The transaction for synchronization of system clocks must be supported by all equipment as receiver. The master (sender) of the time is either the LAS computer or the LIS.作为系统时钟同步的事务必须被所有设备支持，就象接收器一样。时间的控制方（发送方）或者是 LAS 计算机或者是 LIS 一样。

### 13.5.2 Transfer of laboratory test orders and results 实验室检验医嘱和结果的传输

For the transfer of laboratory automation orders and results refer to *4.2.6 OML - laboratory order message (event O21)* instead of ORM and *7.2.2 ORL – unsolicited laboratory observation message (event O20)* instead of ORU.为了 实验室自动化医嘱和结果的传输，用 *4.4.6 OML 实验室命令消息(event O21)*代替 ORM，用 *7.3.2 OUL – 主动实验室观察消息 (event O20)* 代替 ORU。

### 13.5.3 Transfer of QC results QC 结果的传输

Use the 7th component of *OBR-15-specimen source* or *SAC-6 -specimen source* to indicate that this is a control specimen. Use *SAC-3-container identifier* for the identification of a control specimen container. The SID segment appended to this SAC segment specifies the manufacturer, lot identifiers, etc. for the control specimen. 用 *OBR-15-标本源*或 *SAC-6 –标本源* 的第 7 部分说明这是一个控制标本。用 *SAC-3-容器标示符* 是为了控制标本容器的证明。SID 段添加到 SAC 段指定了厂商，标签标示符，等等，作为控制标本。

The identification of the instrument performing the QC measurement, should be transferred with the *OBX-18-equipment instance identifier*), the measurement data/time with *the OBX-19 date/time of the analysis.* 仪器执行 QC 检测的证明应该被带有 *OBX-18-设备实例标识符传输*，测量时间或数据带有 *OBX-19 分析的时间*。

### 13.5.4 Query for order information – triggers for download of test orders 查找

There is no specific query for laboratory order information. Instead, the order information should be downloaded to the LAS either unsolicited (based on LIS internal triggers such as Sample Collected or Order Entered) or after an implicit trigger such as Sample Status Update – sample identified by the LAS.实验室医嘱信息没有特殊的查询。相反，医嘱信息应该被下载到 LAS 上，这可以是主动提供的（基于 LIS 内部触发器，例如被收集或者是规定进入的样本）或者是由于固有的一个触发器——由 LAS 定义的更新状态标本值。

### 13.5.5 Transfer of additional information for automated processing 作为自动处理额外信息的传输

Instruments requiring additional information for performing of automated processing based on automatic validation, such as Expected Date of Birth (Delivery Date), Menstrual Status, History of Medication Use, should consider using OBX segments and LOINC codes. For example, the LOINC code for Delivery Date is 11778-8, Menstrual status is 8678-5, History of Medication Use is 10160-0.Example Messages.设备要求附加信息是为了以自动确认为基础的自动化处理实施，如，预产期（或分娩日期），经期状态，药物使用记录等信息，应该考虑用 OBX 段和 LOINC 编码。例如，LOINC 编码表示分娩日期是 11778-8，经期状态表示为 8678-5，药物使用记录表示为 10160-0。实例消息。

### 13.5.6 Laboratory order message 化验医嘱信息

Laboratory order with multiple containers and multiple test orders related to each container.带有多个容器的化验医嘱与每个容器相关的多重检验医嘱。

```
MSH|^~\&|INSTPROG|AUTINST|LASPROG|LASSYS|19980630080040|SECURITY
    |OML^O21|MSG00001|P|2.4|<cr>

PID|1||28514753||Joan^Howard^J||196303241225|F<CR>

SAC|991912376^EXTLAB|01039421^THISLAB|092321A^LAS|092321^LAS||SER
    |19980620080037|U^UNKNOWN<cr>

ORC|NW|5212400021A|||||^^^^^R<CR>

OBR|1|5212400021A||2951-2^SODIUM^LN|||199808101444||||A||||SER<CR>

ORC|NW|5212400021A|||||^^^^^R<CR>

OBR|1|5212400021A||2000-
    8^CALCIUM.TOTAL^LN|||199808101444||||A||||XXX<CR>

SAC|991912376^EXTLAB|01039421^THISLAB|092321B^LAS|092321^LAS||SER
    |19980620080037|U^UNKNOWN<cr>

ORC|NW|5212400021A|||||^^^^^R<CR>

OBR|1|5212400021A||4064-2^TRAZODONE^LN|||199808101444||||A||||SER<CR>

ORC|NW|5212400021A|||||^^^^^R<CR>

OBR|1|5212400021A||3042-
    9^TRICHLOROETHANOL^LN|||199808101444||||A||||SER<CR>
```

Laboratory order with test order requiring multiple containers (1st with special treatment, 2nd without).带有需要多个容器检验医嘱的化验医嘱（1 有特殊处理，2 没有特殊处理）。

```
MSH|^~\&|INSTPROG|AUTINST|LASPROG|LASSYS|19980630080040|SECURITY
    |OML^O21|MSG00001|P|2.4|<cr>

PID|1||28514753||Joan^Howard^J||196303241225|F<CR>

ORC|NW|5212400021A||||^^^^^R<CR>

OBR|1|5212400021A||11054-4^CHOLESTEROL.LDL/CHOLESTEROL.HDL^LN||
    |199808101444||||A|||XXX<CR>

SAC|991912376^EXTLAB|01039421^THISLAB|092321T^LAS|092321^LAS||ORH
    |19980620080037|I^IDENTIFIED|R5^5_HOLE_RACK|120|1||||BUF1^IN
    BUFFER 1 |||||||||||||^1^:^1|LDLP<cr>

SAC|991912376^EXTLAB|01039421^THISLAB|092321A^LAS|092321^LAS||SER
    |19980620080037|I^IDENTIFIED|R5^5_HOLE_RACK|732|3||||BUF1^IN
    BUFFER 1 |||||||||||||^1^:^1<cr>
```

Laboratory order with test order with previous result, where patient data did not change. 带有预先结果的检验医嘱的化验医嘱，患者数据信息不改变。

```
MSH|^~\&|INSTPROG|AUTINST|LASPROG|LASSYS|19980630080040|SECURITY
    |OML^O21|MSG00001|P|2.4|<cr>

PID|1||28514753||Joan^Howard^J||196303241225|F<CR>

SAC|991912376^EXTLAB|01039421^THISLAB|092321A^LAS|092321^LAS||BLDV
    |19980620080037|U^UNKNOWN<cr>

ORC|NW|5212400021A||||^^^^^R<CR>

OBR|1|5212400021A||2951-2^SODIUM^LN|||199808101444||||A||||SER<CR>

ORC|RE|5212498721A||||^^^^^R<CR>

OBR|1|5212498721A||2951-2^SODIUM^LN|||199807240826|||||||SER<CR>

OBX|1|NM|2951-2^SODIUM^LN||24.3|ug/g||N<CR>
```

## 13.5.7 Unsolicited laboratory observation message 主动提供的实验室观测消息

Analysis results related to a particular container with patient sample.分析关于一个装有患者样本的特殊容器的结果。

```
MSH|^~\&|INSTPROG|AUTINST|LASPROG|LASSYS|19980630080040|SECURITY
    |OUL^R21|MSG00001|P|2.4|<cr>

PID|1||28514753||Joan^Howard^J||196303241225|F<CR>

SAC|991912376^EXTLAB|01039421^THISLAB|092321A^LAS|092321^LAS||SER
    |19980620080037|R^PROCESS COMPLETED<cr>

ORC|RE|5212498721A||||^^^^^R<CR>

OBR|1|5212498721A||2951-2^SODIUM^LN|||199807240826|||||||SER<CR>

OBX|1|NM|2951-2^SODIUM^LN||24.3|ug/g||N<CR>
```

Analysis results related to a particular container with QC sample and the lot and manufacturer information about this sample (see use of SAC-SID segments).分析结果与装有 QC 样本的特殊容器，以及生产厂商的这种样本的编号及制造相关信息。（参见 SAC-SID 段的用法）。

```
MSH|^~\&|INSTPROG|AUTINST|LASPROG|LASSYS|19980630080040|SECURITY
    |OUL^R21|MSG00001|P|2.4|<cr>

SAC|||Q092321^LAS|||SER^^^^^^Q |19980620080037|R^PROCESS COMPLETED<cr>

SID|01230^Na|ABCDE-01234567890||04^RD<cr>

ORC|RE|5212498721A||||^^^^^R<CR>

OBR|1|5212498721A||2951-
    2^SODIUM^LN|||199807240826|||||||SER^^^^^^Q<CR>

OBX|1|NM|2951-2^SODIUM^LN||24.3|ug/g||N<CR>
```

Analysis results of a reflex test for a patient sample with basic identification data (lot, manufacturer, etc.) of the reagent involved in the results generation (see TCD-SID segments). 反向检验的分析结果是为了在结果产生的试剂中的带有基础证明数据的患者样本（参见 TCD-SID 段）。

```
MSH|^~\&|INSTPROG|AUTINST|LASPROG|LASSYS|19980630080040|SECURITY
    |OUL^R21|MSG00001|P|2.4|<cr>

PID|1||28514753||Joan^Howard^J||196303241225|F<CR>

SAC|991912376^EXTLAB|01039421^THISLAB|092321A^LAS|092321^LAS||SER
    |19980620080037|R^PROCESS COMPLETED<cr>

ORC|RE|5212498721A|||||^^^^^R<CR>

OBR|1|5212498721A||2951-2^SODIUM^LN|||199807240826|||||||SER<CR>

OBX|1|NM|2951-2^SODIUM^LN||24.3|ug/g||N<CR>

TCD|2951-2^SODIUM^LN||||||F

SID|01230^Na|PQRST-01234567890||04^RD<cr>
```

### 13.5.8 Automated equipment status update 自动化设备状态更新

The chemistry analyzer 0001 was powered up directly by the operator (local control) and correctly performed the initialization process. This information is sent by the analyzer to the LAS. 0001 化学分析仪直接由操作员（本地控制）启动并且正确进行初始化处理。信息是由分析仪发送给 LAS 的。

```
MSH|^~\&|INSTPROG|AUTINST|LASPROG|LASSYS|19980630080040|SECURITY
    |ESU^U01|MSG00001|P|2.4|<cr>

EQU|0001^CHEMISTRYANALYZER|19980630080038|PU^POWERED_UP|L^LOCAL|N^NORM
    AL<cr>

ISD|123456789|IN^INIT|OK<cr>
```

### 13.5.9 Automated equipment status request 自动化设备状态请求

The LAS queries the chemistry analyzer 0001 for status information. LAS 查询 0001 化学分析仪信息状态。

```
MSH|^~\&|LASPROG|LASSYS|INSTPROG|AUTINST|19980630080040|SECURITY
    |ESR^U02|MSG00001|P|2.4|<cr>

EQU|0001^CHEMISTRYANALYZER|19980630080038<cr>
```

### 13.5.10 Specimen status update 标本状态更新

The chemistry analyzer 0001 recognized an aliquot container (id=092321A) with blood. This container is in a position 1 of carrier type R5 (id=120) and is located in the input buffer 1. 0001 化学分析器识别装有血的分离物容器。这种容器放在 R5 支架类型的位置 1（id=120）中，并被定位于输入缓存 1 中。

```
MSH|^~\&|INSTPROG|AUTINST|LASPROG|LASSYS|19980630080040|SECURITY
    |SSU^U03|MSG00001|P|2.4|<cr>

EQU|0001^CHEMISTRYANALYZER|19980630080038<cr>

SAC|991912376^EXTLAB|01039421^THISLAB|092321A^LAS|092321^LAS||BLD^BLOO
    D |19980620080037|I^IDENTIFIED|R5^5_HOLE_RACK|120|1||||BUF1^INPUT
    BUFFER 1<cr>
```

A pre-analytical instrument 0001 performed aliquoting and sorting operation. 预先分析仪器 0001 执行了分离和排序操作。
(See Fig. 13-5 for visualization of positions and locations)（参见 Fig.13-5 可以看清位置和区

域）
The carrier (id=2002) with primary/parent container (id=12345) at position 2 was transported in the location: output buffer 1, into position 4 of the output tray (id=A1203). 带有主容器（id=12345）支架（id=2002）由位置 2 上输出缓存 1 区域被传送到输出托盘位置 4。
The aliquot container (id=12345A) was sorted into the manual transportable carrier (id=045), in row 3, column 2. This carrier is located in the sorter bed at location 4.分离容器（id=12345A）在手工传送的支架 3 行 2 列中被排序。在区域 4 的排序机床中能找到这个支架。

```
MSH|^~\&|PREANPROG|AUTPREAN|LASPROG|LASSYS|19980630080040|SECURITY
    |SSU^U03|MSG00002|P|2.4|<cr>

EQU|0001^AQS|19980630080043<cr>

SAC|991912376^EXTLAB|01039421^THISLAB|12345^LAS||||19980620080039|R^CO
    MPLETED
    |R3^3_HOLE_RACK|2002|1|OT^OUTPUTTRAY|A1203^AQSTRAY|4|OB1^OUTPUTBUF
    FER<cr>

SAC|991912376^EXTLAB|01039421^THISLAB|12345A^LAS|12345^LAS|||199806200
    80039
    |R^COMPLETED|R14^14_HOLE_RACK|045|3^2||||AQSBED||||||2|0.5||ml<cr>
```

## 13.5.11 Specimen status request 标本状态请求

The chemistry analyzer 0001 queries the LAS for status of specimen/container (id=092321A).0001 化学分析器查询了 LAS 为了得到标本/容器的状态(id=092321A)。

```
MSH|^~\&|LASPROG|LASSYS|INSTPROG|AUTINST|19980630080040|SECURITY
    |SSR^U04|MSG00001|P|2.4|<cr>

EQU|0001^CHEMISTRYANALYZER|19980630080038<cr>

SAC|991912376^EXTLAB|01039421^THISLAB|092321A^LAS||||199806200823<cr>
```

## 13.5.12 Automated equipment inventory update 自动化设备存货清单更新

The chemistry analyzer 0001 sends to the LAS the status of a TSH reagent (id=MF01239) in bottle (id=12345).0001 化学分析器送出了在瓶中的 TSH 试剂(id=MF01239)状态到 LAS 中。

```
MSH|^~\&|INSTPROG|AUTINST|LASPROG|LASSYS|19980630080040|SECURITY
    |INU^U05|MSG00001|P|2.4|<cr>

EQU|0001^CHEMISTRYANALYZER|19980630080038<cr>

INV|MF01239^REAGENT1|OK^OK_STATUS|SR^SINGLE_TEST_REAGENT
    |12345^BOTTLE_NUM|||||190||ML|20000101||^^D60|TSH|A12345678|PROD1<
    cr>
```

## 13.5.13 Automated equipment inventory request 自动化设备存货清单请求

The LAS queries the chemistry analyzer 0001 for status of all packages of the substance (id=MF01239).LAS 查询 0001 化学分析器物质所有包装的状态（id=MF01239）。

```
MSH|^~\&|LASPROG|LASSYS|INSTPROG|AUTINST|19980630080040|SECURITY
    |INR^U06|MSG00001|P|2.4|<cr>

EQU|0001^CHEMISTRYANALYZER|19980630080038<cr>

INV|MF01239^REAGENT1|OK^OK_STATUS<cr>
```

## 13.5.14 Automated equipment command 自动化的设备命令

The LAS sends command of “Clearing Notification” to the chemistry analyzer 0001.LAS 发送了一条“清空布告”的命令到 0001 化学分析器中。

```
MSH|^~\&|LASPROG|LASSYS|INSTPROG|AUTINST|19980630080040|SECURITY
    |EAC^U07|MSG00001|P|2.4|<cr>
```

```
EQU|0001^CHEMISTRYANALYZER|19980630080038<cr>
ECD|89421|CN^CLEAR NOTIFICATION|Y^YES<cr>
CNS|1209|1500|199806010800|199806300800<cr>
```

### 13.5.15 Automated equipment response 自动化的设备响应

The chemistry analyzer confirms completion of the execution of the initialization command.化学分析器确认初始化命令完毕。

```
MSH|^~\&|INSTPROG|AUTINST|LASPROG|LASSYS|19980630080040|SECURITY
    |EAR^U08|MSG00001|P|2.4|<cr>
EQU|0001^CHEMISTRYANALYZER|19980630080038<cr>
ECD|89421|IN^INIT|Y^YES<cr>
ECR|OK^COMMAND_COMPLETE|19980630080035<cr>
```

### 13.5.16 Automated equipment notification 自动化的设备公告

The chemistry analyzer sends a notification (warning) about drift in the detection unit.化学分析器发送一个关于在检测单元中冲洗的公告。

```
MSH|^~\&|INSTPROG|AUTINST|LASPROG|LASSYS|19980630080040|SECURITY
    |EAN^U09|MSG00001|P|2.4|<cr>
EQU|0001^CHEMISTRYANALYZER|19980630080038<cr>
NDS|8923|199806300800|W^WARNING^|DU001^DETECTIO UNIT DRIFT<cr>
```

### 13.5.17 Automated equipment test code settings update 自动设备检验码设置更新

The LAS send update of configuration parameters for Glucose test.LAS 发送葡萄糖检验的配置参数的更新。

```
MSH|^~\&|LASPROG|LASSYS|INSTPROG|AUTINST|19980630080040|SECURITY
    |TCU^U10|MSG00001|P|2.4|<cr>
EQU|0001^CHEMISTRYANALYZER|19980630080038<cr>
TCC|15074-8^GLUCOSE|GLU-HK^CHEMISTRYANALYZER|SER^SERUM|10|10|0|0|500|
    Y^YES|Y^YES|N^NO |^2^-^400|mg/dL|P<cr>
```

### 13.5.18 Automated equipment test code settings request 自动设备检验码设置请求

The chemistry analyzer 0001 queries the LAS for configuration parameters of the Glucose test.化学分析器 0001 查询 LAS 葡萄糖检验的配置参数。

```
MSH|^~\&|INSTPROG|AUTINST|LASPROG|LASSYS|19980630080040|SECURITY
    |TCR^U11|MSG00001|P|2.4|<cr>
EQU|0001^CHEMISTRYANALYZER|19980630080038<cr>
TCC|15074-8^GLUCOSE|GLU-HK^CHEMISTRYANALYZER<cr>
```

### 13.5.19 Automated equipment log/service update 自动化设备日志/服务更新

The chemistry analyzer 0001 sends 1 record from the event log to the LAS.化学分析器 0001 从事件日志送出一条记录到 LAS 中。

```
MSH|^~\&|INSTPROG|AUTINST|LASPROG|LASSYS|19980630080040|SECURITY
    |LSU^U12|MSG00001|P|2.4|<cr>
```

```
EQU|0001^CHEMISTRYANALYZER|19980630080038<cr>
EQP|LOG^LOG_EVENT||199806300755|199806300800|I976 Instrument
    Initialization<cr>
```

### 13.5.20 Automated equipment log/service request 自动化设备日志/服务请求

The LAS queries chemistry analyzer for log file of events occurring between 7am and 8am on 30th June 1998.在 1998 年 6 月 30 日上午 7 点到 8 点之间事件发生的日志文件进行 LAS 查询化学分析。

```
MSH|^~\&|LASPROG|LASSYS|INSTPROG|AUTINST|19980630080040|SECURITY
    |LSR^U13|MSG00001|P|2.4|<cr>
EQU|0001^CHEMISTRYANALYZER|19980630080038<cr>
EQP|LOG^LOG_EVENT||199806300700|199806300800<cr>
```

## 13.6 OUTSTANDING ISSUES 突出问题

None.无。