Urinalysis Workarea
Information Management System U-WAM
ASTM Host Online Specifications

Revision 6

Sysmex Corporation

Revision History

Revision	Date	Content Revised
1	-	Initial Version
2	December 19, 2014	Corrected erroneous description
3	August 26, 2015	Revised for release of drawings.
4	December 11, 2015	Revised for U-WAM Ver00-03 compatibility. • Descriptions related with urine chemistry, visual examination, and particle classification are added to “5. Example of Communication” and “Appendix B. Analysis Parameters”. • A communication example of review comments is added to “5.2.2 Urine sediment analysis results”. • Descriptions related with urine chemistry analyzers and particle digital imaging devices are added to “B.7 QC Parameters”. • ASCII format description for “O” is added to the ASTM field “8.4.26 Report Type” in “4.3.3.3. Analysis Order Record”. • Remarks of the ASTM field “9.7 Analysis Result Record Abnormal Flag” in “4.3.3.4. Analysis Result Record” is modified. • Notes are added to each section of “Appendix B. Analysis Parameters”. • Descriptions of available profiles are added to “Appendix G. Units”.
5	February 26, 2016	Revised for U-WAM ver00-04 compatibility. • Descriptions related with two ports are added to “4.2. Data Link Layer (Transmission Protocol)”. • “4.3.2.2. Order inquiry (U-WAM → host computer)” is added. • Research parameters and research information are added to the result type “S” described in “4.3.3.4. Analysis Result Record”. • “4.3.3.6. Inquiry record” is added. • Note that the parameters may not be output depending on the setting of U-WAM is added to “Appendix B. Analysis Parameters”. • SI units description is added to “B.1 Urine Chemistry (Profile: Chemistry)”. • “Normal” is corrected to “normal” for data value (qualitative) of urobilinogen in “B.1 Urine Chemistry (Profile: Chemistry)”. • “WBC Clumps, Squa.EC, Non SEC, Tran.EC, RTEC, and Hy.CAST” are deleted from the flags for UF-4000 (North America) and UF-5000 (North America) in “B.2 Urine Sediment (Profile: UF)”. • Research parameters are added to “B.2 Urine Sediment (Profile: UF)”. • “WBC Clumps, Squa.EC, Non SEC, Tran.EC, RTEC, and Hy.CAST” are deleted from the reportable parameter flags for UF-4000 (North America) and UF-5000 (North America) in “B.2 Urine Sediment (Profile: UF)”. • Parameters in “B.1 Urine Chemistry (Profile: Chemistry)” are sorted according to the order of transmission to host. • Note that the result value may be changed depending on the laboratory is added to “B.4 Particle Classification (Profile: Particle Classification)”. • Research parameters are added to “B.5 Body Fluid (Profile: BF)”. • Parameters for China are deleted from “B.5 Body Fluid (Profile: BF)”. • Units for semi-quantitative values are deleted in “B.3 Visual examination (Profile: Visual)”, “B.4 Particle Classification (Profile: Particle Classification)”, and “B.6 Body Fluid Visual Examination (Profile: Visual body fluid)”. • “Appendix C. Research Information” is added.

		• SPERM CarryOver and RBC YLC fraction error are added to "Appendix D. Review Comments". • Note that the values in "Name for host transmission" column are fixed in QC parameters is added to "F.1 Reportable Parameters and Research Parameters (Result Type "S")". • Column name "Parameter ID" is corrected to "Name for host transmission" as default names for host transmission in "F.1 Reportable Parameters and Research Parameters (Result Type "S")". • "F.2 Research Information (Result Type "S")" is added. • Descriptions of µmol/L, mmol/L, g/L, and c/µL are added to "Appendix H. Units". • Output Specifications of chemistry abnormal flag (! ? *) is added to "9.7 Analysis Result Record Abnormal Flag".
6	2016/06/03	• It was added to supplementary information to RC_SPERM_CarryOver.(Appendix D. Review Comments) • It was added to qualitative and semi-quantitative specification to B.7 QC Parameters. • It was added to chemistry QC analysis results example to 5.2.6QC analysis results. • It was added to configuration information of the two-port communication to 4.2Data Link Layer (Transmission Protocol). • It was added to explanation of download mode and query mode to 4.3.2Communication protocol.

Cause

1. General

U-WAM

2. Scope

This specification applies to ASTM communication between U-WAM and a host computer.

3. Glossary

The terms used in this document are defined below.

Numeric character:

ASCII code characters “0” (30h) through “9” (39h). Full-width characters such as “ **0**” are not treated as numeric characters.

Alphabetic character:

ASCII code characters “A” (41h) through “Z” (5Ah) and “a” (61h) through “z” (7Ah). Full-width characters such as “ **A**” are not treated as alphabetical characters.

Single-byte character:

ISO/IEC 646 (ASCII) character codes 00h through 7Fh (7-bit codes), except control characters (00h through 1Fh) and DEL (7FH).

Extended single-byte character:

ISO/IEC 8859 character codes 00h through FEh (8-bit codes), except control characters (00h through 1Fh, 80H through 9FH) and DEL (7FH).

For example, single-byte katakana and Latin-1 characters are included.

Alphanumeric character:

Numeric and alphabetical characters.

RAW data:

Result values received from the analyzer before conversion of units or other processing.

Main Format:

Result value format set as the “Main Format” in the result display formats of the parameters.

ASTM LIS2-A2:

Specifications of the low-level protocol used for transfer of messages between clinical laboratory equipment and computer systems

IEEE802.3:

Standards that define media access control (MAC) in the physical layer and data link layer of wired Ethernet

4. Communication Specifications

Communication specifications are based on a layer protocol.

(1) Physical layer

Specifies the transmission and reception of signals between the instrument and the host computer through mechanical and electrical connections.

(See section 4.1.)

(2) Data link layer

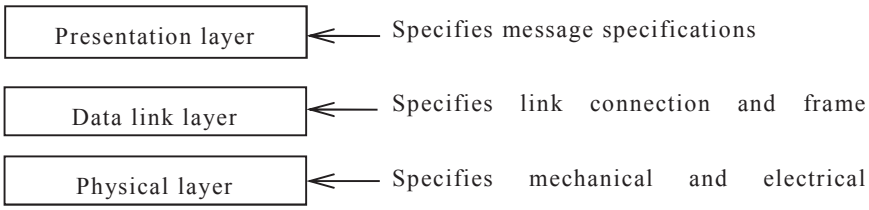
Specifies the transmission and reception of data by link connections and by frame between the instrument and the host computer.

(See section 4.2.)

(3) Presentation layer

Specifies the messages that are sent and received between the instrument and the host computer.

(See section 4.3.)



Note:
Only TCP/IP connections are supported.
In a TCP/IP connection, the presentation layer conforms to ASTM LIS2-A2.
The data link layer and the physical layer conform to IEEE802.3.

4.1. Physical Layer (Hardware)

4.1.1. TCP/IP connection

4.1.1.1. Connector and cable

· A compatible connector must be used for the Ethernet connector of the PC on which U-WAM is installed.

· For the communication cable, use UTP category 5 or higher cable.

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4.1.1.2. Signal Identification Level

Conforms to IEEE802.3.

4.1.1.3. Input/Output Circuit

Conforms to IEEE802.3.

4.2. Data Link Layer (Transmission Protocol)

The data link layer transfers messages between systems using a character-based protocol in accordance with the specifications of the data link layer of ASTM LIS2-A2. This section briefly describes communication control procedures. For details, see IEEE802.3.

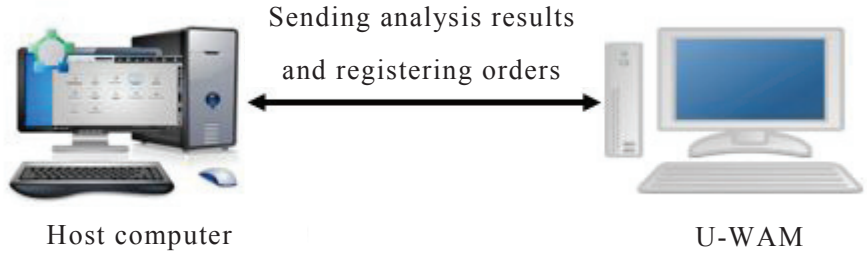
For the TCP/IP connection, the TCP connection is established prior to communication. To establish the connection, the host computer acts as a server and the U-WAM acts as a client. U-WAM establishes a connection by requesting a connection to the IP address and the port number that are provided by the host computer.

U-WAM supports up to two ports for communicating with the host computer. The following two operation methods are assumed.

■ When using one port for communicating with a host computer

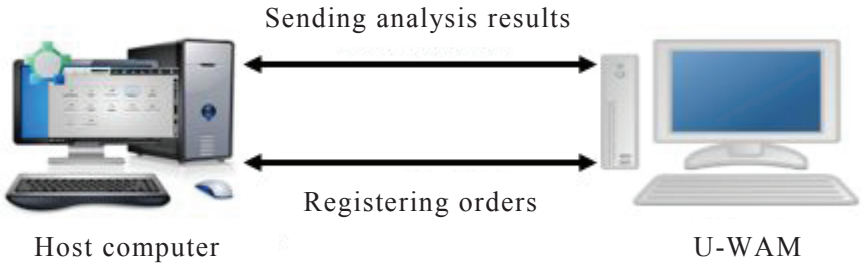
U-WAM sends analysis results to the host computer, and the host computer registers orders to U-WAM via one port.

* If the reception of analysis result information and the sending of order information occur at the same timing, “ENQ clash” may occur.

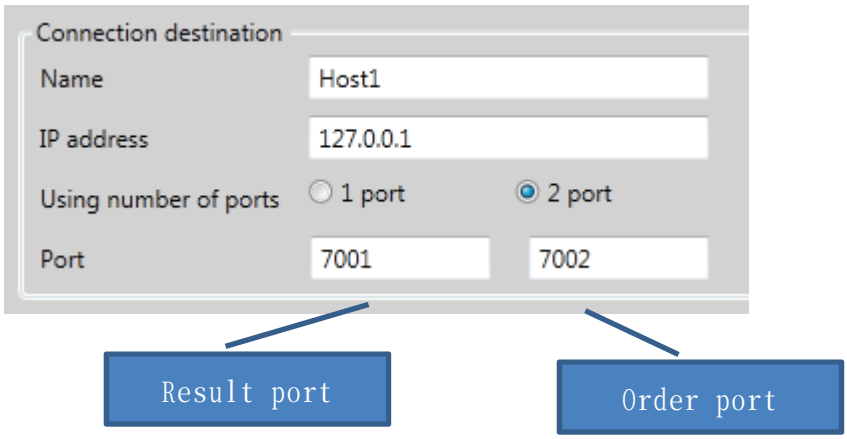


■ When using two ports for communicating with the host computer

To avoid “ENQ clash”, separate ports are used for sending from U-WAM to the host computer and sending from the host computer to U-WAM.



It is possible to change port number by user setting screen of U-WAM.
Result port and order port can be set in the following screen.



4.2.1. Communication status

The data link layer has the following 2 communication states:

- Neutral status
- Linked status

Transition to each status is accomplished through the following 3 phases.

(1) Establishment phase

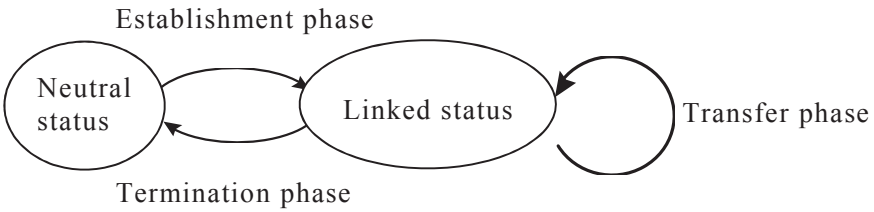
Establishes a communication line, and determines the direction of data transfer. In this way, the sender and the receiver are identified, and the change is made from neutral status to linked status.

(2) Transfer phase

The sender transmits messages to the receiver until all messages are transferred.

(3) Termination phase

Releases the communication line. Changes both the sender and the receiver from linked status to neutral status.



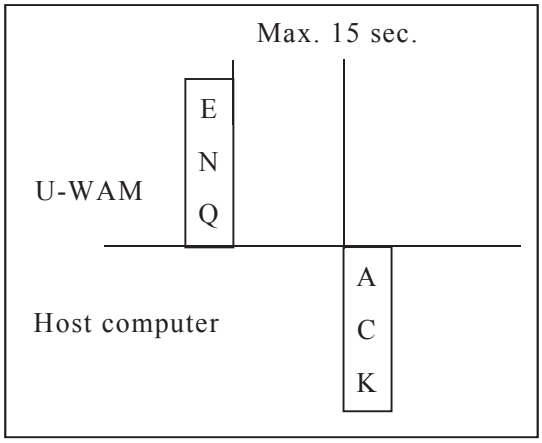
4.2.2. Establishment phase

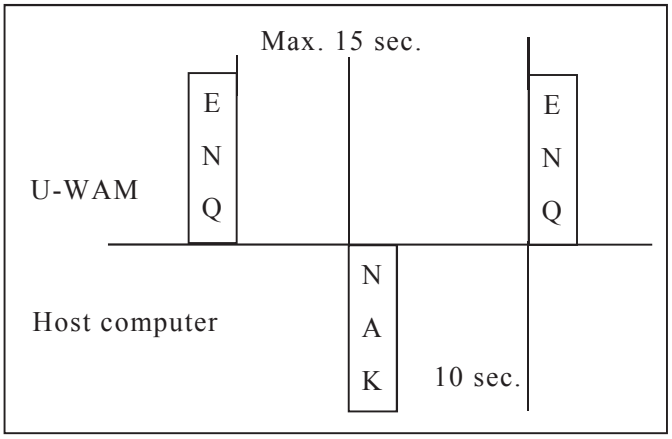
(1) The sender (IPU) sends an [ENQ] signal to the receiver (host computer). The receiver responds to the sender as follows:

・Returns an [ACK] signal if communication is enabled.

・Returns a [NAK] signal if communication is disabled.

If the receiver responds with [NAK] signal, the sender waits for at least 10 seconds before attempting to send another [ENQ] signal.

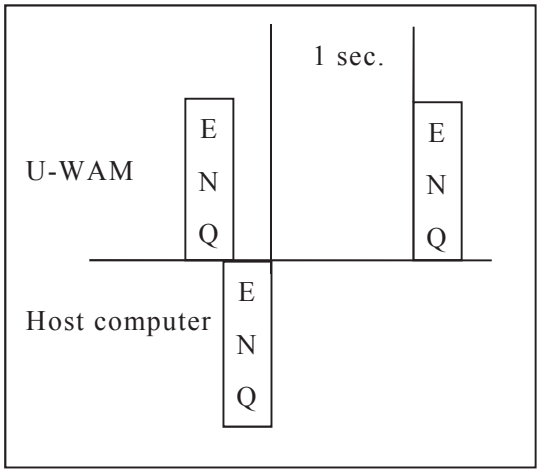


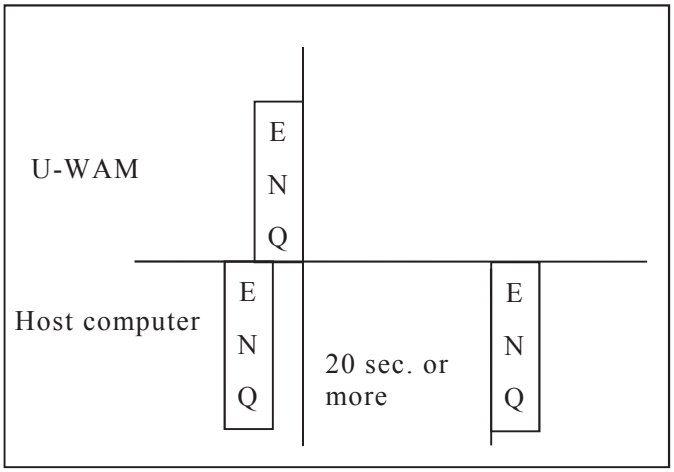


(2) When both the sender and receiver send [ENQ] signals, the host computer must yield control to U-WAM.

・U-WAM IPU sends an [ENQ] signal again after 1 second.

・The host computer must wait at least 20 seconds before sending an [ENQ] signal again.





4.2.3. Transfer phase

During the transfer phase, the sender sends messages to the receiver. The transfer phase continues until all messages have been sent.

(1) Messages are sent using multiple frames per record. The maximum number of characters in a record is set to 240 characters.

(2) Multiple records cannot be included in a single text frame.

(3) If the record contains no more than the maximum number of characters, a frame with the following structure will be sent.

[STX] [F#] [Text] [ETX] [CHK1] [CHK2] [CR] [LF]

If the record is longer than the maximum number of characters, it is divided into 2 or more frames. The intermediate frame text termination code is [ETB] and the final frame text termination code is [ETX], as shown below.

[STX] [F#] [Text] [ETB] [CHK1] [CHK2] [CR] [LF]

[STX] [F#] [Text] [ETB] [CHK1] [CHK2] [CR] [LF]

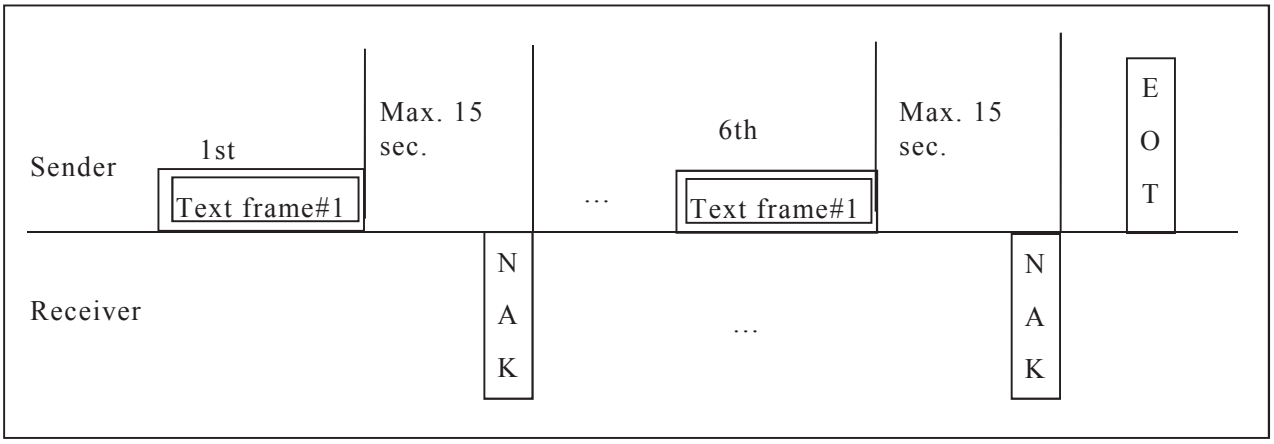
……

[STX] [F#] [Text] [ETX] [CHK1] [CHK2] [CR] [LF]

Symbol	Description
[STX]	Start of a frame.
[F#]	Frame number. A number from 0 to 7 is used. The number starts from 1 and continues through 2,3,4,5,6,7,0, after which the sequence repeats. In case of retransmission, the same frame number is sent.
[Text]	ASTM LIS2-A2 records are used. For this reason, the codes below cannot be used. 0x00-0x06,0x08,0x0A,0x0E-0x1F,0x7F,0xFF
[ETB]	Control code indicating end of text (for intermediate frames).
[ETX]	Control code indicating end of text (for the final frame).
[CHK1] [CHK2]	Expressed by characters “0”-“9” and “A”-“F”. Characters from the next character after [STX] through [ETB] or [ETX] (including [ETB] or [ETX]) are added in binary. The least significant 8 bits are expressed in hex as a 2-digit number, which is converted to ASCII characters “0” to “9” and “A” to “F”. The most significant digit is stored in CHK1 and the least significant digit is stored in CHK2.
[CR] [LF]	Control code indicating end of frame.

(4) When the receiver has successfully received the frame and is prepared to receive the next frame, the receiver responds with an [ACK] signal. After the sender receives the [ACK] signal, the sender increments the frame number and either sends a new frame or transitions to the termination phase.

(5) If the receiver fails to receive the frame and is prepared to receive the same frame again, the receiver responds with a [NAK] signal. After receiving [NAK], the sender sends the most recent frame again, using the same frame number. If the sender fails to send the same frame 6 times consecutively, the sender must transition to the termination phase and cancel transmission of the message.



(6) U-WAM processes the [EOT] response from the host computer as an [ACK] signal. (An [EOT] response from the receiver is normally a request to the sender to stop transmission. However, U-WAM does not support this function.)

4.2.4. Termination phase

During the termination phase, the status returns to neutral.

The sender sends an [EOT] signal to inform the receiver that message transmission has been completed. The sender transitions to neutral status by sending an [EOT] signal, and the receiver transitions to neutral status by receiving the [EOT] signal.

4.2.5. Timeout

The timer is used to detect a failure to coordinate between the sender and the receiver. The timer is used as a means of recovery from failure in a communication line or in a destination device.

(1) During the establishment phase, the timer is set when the sender sends an [ENQ] signal. A timeout occurs if an [ACK], [NAK] or [ENQ] signal response is not received within 15 seconds. After the timeout, the sender transitions to the termination phase.

(2) During the transfer phase, the timer is set when the sender sends the final character of a frame. Send a response within the following time limit.

■ Order inquiry

・When U-WAM is connected to a chemistry analyzer: within 8 seconds

・When U-WAM is not connected to a chemistry analyzer: within 18 seconds

After the timeout, the sender transitions to the termination phase. The receiver sets a 30-second timer when first entering the transfer phase or when responding (by [ACK] or [NAK]) to a frame. A timeout occurs if the receiver receives no frame or [EOT] signal from the sender within 30 seconds. After the timeout, the receiver discards the current incomplete message and transitions to the termination phase.

4.3. Presentation layer

4.3.1. Messages, Records, and Fields

4.3.1.1. Messages

In the presentation layer, all data is transmitted using messages. A message consists of a sequence of records that starts with a message header record (H) and ends with a message termination record (L).

4.3.1.2. Records

A record is a sequence of text that begins with an ASCII alphabetic character called a record identifier and ends with [CR].

Record type	Record identifier	Level	Cause
Header	H	0	Contains sender and receiver information.
Patient Information	P	1	Contains patient information.
Inquiry	Q	1	Not used.
Analysis order	O	2	Contains analysis order information.
Analysis result	R	3	Contains analysis result information.
Comment	C	1 - 4	Contains comments about the sample, patient, or report.
Manufacturer information	M	1 - 4	Not used.
Scientific information	S	N/A	Not used.
Message termination	L	0	Indicates the end of the message.

- A smaller level number indicates a higher level.
- A high-level record holds information that is common to all low-level records.
- Any level other than 0 must be positioned after higher levels. However, the comment record can be inserted at any level. The comment record is considered to be one lower level than the preceding record. However, consecutive comment records are not allowed.

[Transmission example] (Correct): H->P->O->R->L

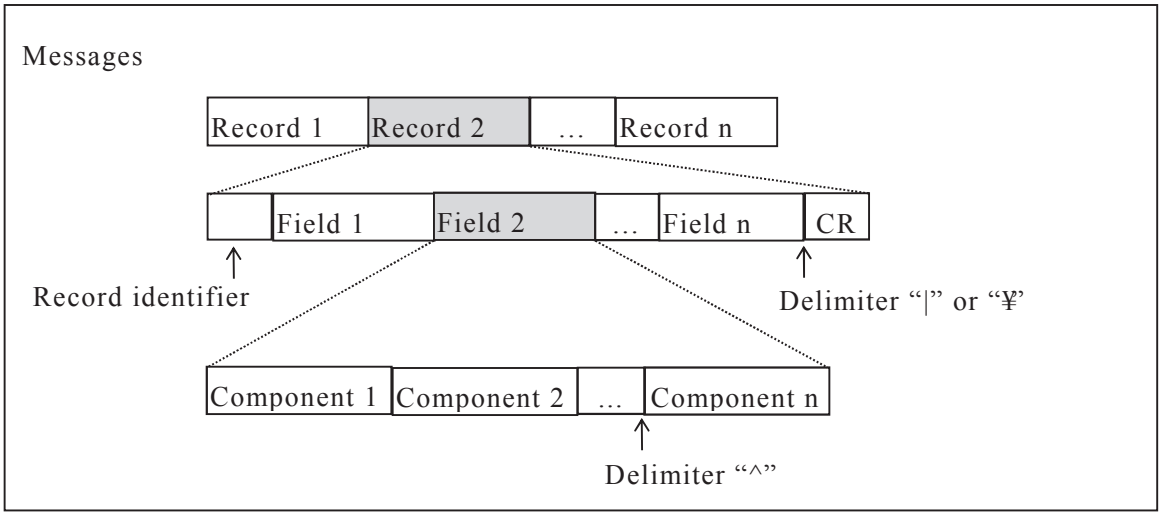
(Incorrect): H->R->L (P and O must be transmitted prior to R)

4.3.1.3. Fields

A record is further divided into multiple fields by field delimiters. A field is identified by its position within a record and has a variable length. The following are used as delimiters.

Delimiter type	Code	Cause
Field delimiter	Vertical bar (|) (7Ch)	Separates adjacent fields within a record.
Repeat delimiter	Backslash (¥)(5Ch)	Used to repeat the same field when there are multiple components of the same type in the field.
Component delimiter	Caret (^) (5Eh)	Separates a single field into multiple sub-fields.

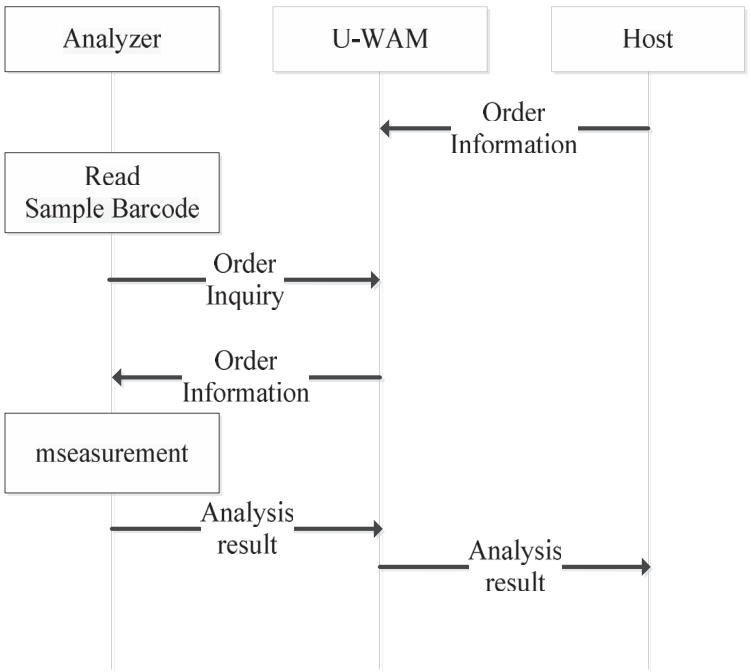
Escape delimiter	Ampersand (&) (26H)	Used to embed special characters in the data. To use Japanese for a name or comment, directly use full-width characters without using escape delimiters. The same is true for the scatter image path in a result message. ("|" → &F&, "¥" → &R&, "^" → &S&, "&" → &E&, and hexadecimals → &Xxxxx&)



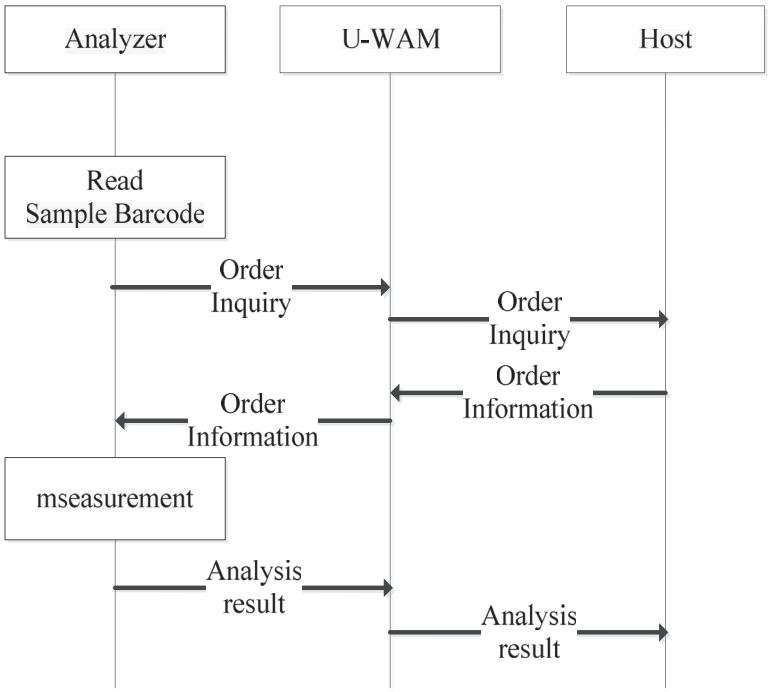
4.3.2. Communication protocol

Communication of order information has 2 communication mode(Download mode and Query mode).Download mode is standard mode.Communication mode can change by U-WAM setting function. Please confirm IFU and Service manual.

<Download mode>



<Query mode>



Attention!

If user want to connect query mode, Contact your local Sysmex service representative.

If user connects query mode, connect U-WAM and Host must always 2 port.

(If user connected 1 port, communication error occurs because U-WAM and LIS communication Traffic is heavy.)

4.3.2.1. Analysis order information (host computer → U-WAM)

Used to send registration, editing, and cancellation of orders from the host computer. A comment record can be omitted.

U-WAM	Direction	Host computer
	←	ENQ
ACK	→	
	←	H: Header record
ACK	→	
	←	P: Patient record
ACK	→	
	←	C: Patient comment record
ACK	→	
	←	O: Order record
ACK	→	
	←	C: Sample comment record
ACK	→	
	←	L: Message terminator record
ACK	→	
	←	EOT

4.3.2.2. Order inquiry (U-WAM → host computer)

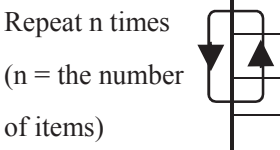
When U-WAM receives an order inquiry from an analyzer and the inquired order cannot be found in U-WAM, U-WAM makes inquiry to the host computer.

U-WAM	Direction	Host computer
ENQ	←	
	→	ACK
H: Header record	←	
	→	ACK
Q: Inquiry record	←	
	→	ACK
L: Message terminator record	←	
	→	ACK
EOT	←	

* Order inquiry can be enabled or disabled in U-WAM settings.
* For the response of host computer to order inquiries, refer to “4.3.2.2 Order inquiry (U-WAM → host computer)”.
* For the timeout for order inquiries, refer to “4.2.5 Timeout”.
* For the response to an order inquiry, send all orders to the inquired sample number.
* If there is no order to the inquired sample number when responding to an order inquiry, set the received sample number to Specimen ID of 0 record, and set nothing to Analysis Parameter ID.

4.3.2.3. Analysis results, QC results (U-WAM → host computer)

Used to output analysis results and QC results (QC results selected in the QC Chart screen are output). If patient information is not registered or QC results are output, the patient record is sent blank. The report comment record is output only when report comments are output. (If there are no report comments, the report comment record is omitted.)



U-WAM	Direction	Host
ENQ	→	
	←	ACK
H: Header record	→	
	←	ACK
P: Patient record	→	
	←	ACK
O: Order record	→	
	←	ACK
R: Result record	→	
	←	ACK
C: Report comment record	→	
	←	ACK
L: Message terminator record	→	
	←	ACK
EOT	→	

4.3.3. Details of Records

4.3.3.1. Header Record

<Field definitions>

ASTM field	Field name	Host → U-WAM	U-WAM → Host	Max. size (bytes)	Remarks
6.1	Record Type	H	H	1	Fixed
6.2	Delimiter Definition	| ¥&	| ¥&	4	Fixed
6.3	Message control ID	Not used	Not used	-	
6.4	Access Password	Not used	Not used	-	
6.5	Sender Name or ID	Host Name^	Product Name^ Software Version^ Serial No.^^^^ PS Code	8^ 14^ 5^^^^ 8	
6.6	Send Address	Not used	Not used	-	
6.7	Reserved Field	Not used	Not used	-	
6.8	Sender Telephone Number	Not used	Not used	-	
6.9	Sender Characteristics	Not used	Not used	-	
6.10	Receiver ID	Not used	Not used	-	
6.11	Comment	Not used	Not used	-	
6.12	Processing ID	Not used	Not used	-	
6.13	Version No.	LIS2-A2	LIS2-A2	7	Fixed
6.14	Date and Time	Not used	Message Date & Time YYYYMMDDHHMMSS	-	YYYY: Year MM: Month DD: Day HH: Hour MM: Minute SS: Second

<Detailed explanation of fields>

1) 6.2 Delimiter Definition

The characters "|¥&" are used as a fixed character string. A delimiter is not required between 6.1 and 6.2.

2) 6.5 Sender Name or ID

Host name:	Host computer name
Product name:	“U-WAM” (fixed)
Software version:	U-WAM software version
Serial number:	U-WAM serial number
PS code:	U-WAM PS code

3) 6.14 Date and Time

Time stamp indicating when the message was created.

4.3.3.2. Patient Information Record

<Field definitions>

ASTM field	Field name	Host → U-WAM	U-WAM → Host	Max. size (bytes)	Remarks
7.1	Record Type	P	P	1	Fixed
7.2	Sequence Number	Sequence Number	Sequence Number	4	Sequence Number of records
7.3	Practice-Assigned Patient ID	Not used	Not used	-	
7.4	Laboratory-Assigned Patient ID	Patient ID	Patient ID	16	
7.5	Patient ID	Not used	Not used	-	
7.6	Patient Name	Last Name^ First Name^ Middle Name^ ¥ Last Name (kanji)^ First Name (kanji)^^^	Last Name^ First Name^ Middle Name^ ¥ Last Name (kanji)^ First Name (kanji)^^^	20^ 20^ 20^ ¥ 20^ 20^^^	
7.7	Mother's Maiden Name	Not used	Not used	-	
7.8	Birth Date	Birth Date, A.D.	Birth Date, A.D.	8	YYYY: Year MM: Month DD: Day Example: 20010802 (Aug. 2, 2001)
7.9	Patient Sex	Patient Sex	Patient Sex	1	M: Male F: Female U: Unknown
7.10	Patient Race	Not used	Not used	-	
7.11	Patient Address	Not used	Not used	-	
7.12	Reserved Field	Not used	Not used	-	
7.13	Patient Telephone Number	Not used	Not used	-	
7.14	Attending Physician ID	Not used	Not used	-	
7.15	Special Field 1 (Blood type and RH type)	Blood type and RH type	Blood type and RH type	5	ANEG: A- APOS: A+ BNEG: B- BPOS: B+ ONEG: O- OPOS: O+ ABNEG: AB- ABPOS: AB+ (Blank): Unknown
7.16	Special Field 2	Not used	Not used	-	

ASTM field	Field name	Host → U-WAM	U-WAM → Host	Max. size (bytes)	Remarks
7.17	Patient Height	Not used	Not used	-	
7.18	Patient Weight	Not used	Not used	-	
7.19	Patient's Known or Suspected Diagnosis	Disease Code	Not used	10	
7.20	Patient Active Medications	Not used	Not used	-	
7.21	Patient Dietary Treatment	Not used	Not used	-	
7.22	Attending Physician Field 1	Not used	Not used	-	
7.23	Attending Physician Field 2	Not used	Not used	-	
7.24	Admission and Discharge Dates	Not used	Not used	-	
7.25	Admission Status	In/Out Status	In/Out Status	2	OP: Out-patient IP: In-patient (Blank): Unknown
7.26	Location	Not used	Not used	-	
7.27	Alternate Diagnosis Code and Classification Type	Not used	Not used	-	
7.28	Alternate Diagnosis Code and Classification	Not used	Not used	-	
7.29	Patient Religion	Not used	Not used	-	
7.30	Marital Status	Not used	Not used	-	
7.31	Isolation Status	Not used	Not used	-	
7.32	Language	Not used	Not used	-	
7.33	Hospital Service	Not used	Not used	-	
7.34	Hospital Institution	Not used	Not used	-	
7.35	Medicine Administration Type	Not used	Not used	-	

<Detailed explanation of fields>

1) 7.2 Sequence Number

The sequence number starts at 1 and indicates the sequence position in which the record appeared in the message. This number is reset to 1 when a higher-level record appears in the message.

2) 7.4 Laboratory-Assigned Patient ID

Unique patient ID. Up to 16-digit extended single-byte characters can be used.

3) 7.6 Patient Name

Any characters can be used for the first name (max. 20 characters) and the last name (max. 20 characters). For Japan, last names in kanji can be set using the delimiter "\".

4) 7.8 Birth Date

Date of birth of the patient.

5) 7.9 Patient Sex

Gender of the patient.

6) 7.15 Special Field 1 (Blood type and RH type)

Blood type and RH type of the patient. To send "unknown", leave blank.

7) 7.19 Patient's Known or Suspected Diagnosis

The patient's disease code. Only one can be set. See section "Appendix I. Disease Information".

7) 7.25 Admission Status

Admission status of patient. To send "unknown", leave blank.

4.3.3.3. Analysis Order Record

<Field definitions>

ASTM field	Field name	Host → U-WAM	U-WAM → Host	Max. size (bytes)	Remarks
8.4.1	Record Type	O	O	1	Fixed
8.4.2	Sequence Number	Sequence Number	Sequence Number	4	Sequence Number of records
8.4.3	Specimen ID	Sample No.	Sample No.	22	
8.4.4	Instrument Specimen ID	Not used	Not used	-	
8.4.5	Universal Test ID	^^^ Parameter ID	^^^ Parameter Name for Host Transmission	^^^ 40	1 to 100 analysis parameters can be set using "¥" as a delimiter
8.4.6	Priority	Priority	Priority	1	R: Routine A: Urgent S: Emergency
8.4.7	Requested/Order Date and Time	Not used	Not used	-	
8.4.8	Collection Date and Time	Collection Date and Time YYYYMMDDHHMMSS	Collection Date and Time YYYYMMDDHHMMSS	14	YYYY: Year MM: Month DD: Day HH: Hour MM: Minute SS: Second
8.4.9	Collection End Time	Not used	Not used	-	
8.4.10	Collection Volume	Not used	Not used	-	
8.4.11	Collector ID	Not used	Not used	-	
8.4.12	Action Code	C, A, N	N, Q	1	
8.4.13	Danger Code	Not used	Not used	-	
8.4.14	Relevant Clinical Information	Not used	Not used	-	
8.4.15	Date/Time Specimen Received	Not used	YYYYMMDD HHMMSS	14	
8.4.16	Specimen Descriptor (Source)	Urine, Urine-EarlyMorning, Urine-Pooled, Urine-Postprandial, Urine-Catheter, Blank	Urine, Urine-EarlyMorning, Urine-Pooled, Urine-Postprandial, Urine-Catheter, *	20	Urine: Urine collected any time Urine-EarlyMorning: Early morning urine Urine-Pooled: Pooled urine Urine-Postprandial: Urine collected after eating Urine-Catheter: Urine collected by catheter [Host → U-WAM] Blank: Unknown [U-WAM → Host] *: Unknown

ASTM field	Field name	Host → U-WAM	U-WAM → Host	Max. size (bytes)	Remarks
8.4.17	Physician Who Placed Order	Physician Code^ Physician Last Name ^ Physician First Name ^^^ Physician Title	Physician Code^ Physician Last Name ^ Physician First Name ^^^	20^ 20^ 20^^^ 10	
8.4.18	Physician Phone Number	Physician Phone Number	Not used	20	
8.4.19	User Field No. 1 (Order No.)	Order No.	Order No.	22	
8.4.20	User Field No. 2 (Reference values of other fields)	Not used	Not used	-	
8.4.21	Lab Field No. 1	Not used	Not used	-	
8.4.22	Lab Field No. 2	Not used	Not used	-	
8.4.23	Date/Time Results Reported or Last Modified	Not used	Not used	-	
8.4.24	Instrument Charge to Computer System	Not used	Not used	-	
8.4.25	Instrument ID	Not used	Not used	-	
8.4.26	Report Type	O	F	1	O: New order F: Final result
8.4.27	Reserved Field	Not used	Not used	-	
8.4.28	Location or Ward of Specimen Collection	Ward Code^ Ward Name^ Phone Number	Ward Code^ Ward Name	20^ 20^ 20	
8.4.29	Nosocomial Infection Flag	Not used	Not used	-	
8.4.30	Specimen Service	Not used	Not used	-	
8.4.31	Specimen Institution	Medical Section Code^ Medical Section Name	Medical Section Code^ Medical Section Name	20^ 20	

<Detailed explanation of fields>

1) 8.4.2 Sequence No.

The sequence number starts at 1 and indicates the sequence position in which the record appeared in the message. This number is reset to 1 when a higher-level record appears in the message.

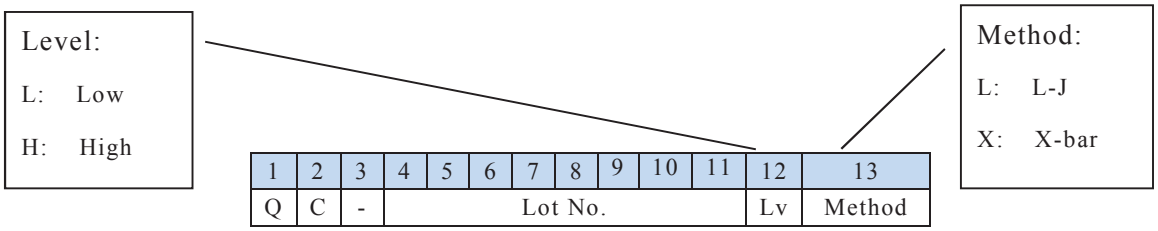
2) 8.4.3 Specimen ID

Sample number: 22 extended single-byte characters can be used. When the sample number is less than 22 characters, the number is left-aligned without padding by zeros or spaces before or after the ID.

Sample numbers beginning with “QC” are reserved for QC analysis.

*QC samples

Sample numbers of QC materials consist of “QC-”, the lot number, control level, and QC method.



3) 8.4.5 Universal Test IDs

Parameter ID

When an order is sent from the host computer to U-WAM, the IDs of the parameters to be analyzed are listed. Refer to “Appendix B. Analysis Parameters” for parameter IDs that can be set.

Parameter Name for Host Transmission

When a results are sent from U-WAM to the host computer, the parameters that were analyzed are listed. The values set at this time are the parameter names that are held in U-WAM for transmission to the host computer. (Refer to [Parameter] - [(profile)] - [(parameter name)] in the user settings screen of U-WAM. The values in the “Name for Host Transmission” field are indicated.)

By default, the values in the “Parameter ID” column defined in each table of “Appendix B. Analysis Parameters” are set as the names for host transmission.

4) 8.4.6 Priority

Priority classification of the sample.

5) 8.4.8 Collection Date and Time

Date and time the sample was collected from the patient. This field is required when an order is sent from the host computer to U-WAM.

6) 8.4.12 Action Code

[Host computer → U-WAM]

Code indicating the type of order information to be sent.

C: Cancellation of a parameter

A: Addition of a parameter to an existing order

N: New order

[U-WAM → Host computer]

Indicates the type of result information to be sent.

N: Sample analysis results

Q: QC analysis results

7) 8.4.15 Date/Time Specimen Received

The date and time U-WAM received the order from the host, or the date and time the order was manually registered using U-WAM.

8) 8.4.16 Specimen Descriptor (Urine Type)

Sample urine type.

9) 8.4.17 Physician Who Placed Order

Physician information of sample.

10) 8.4.18 Physician Telephone Number

Telephone number of physician associated with the sample.

11) 8.4.19 User Field No. 1 - Order No.

The order number is used to identify the order. Assigned by the host computer. Up to 22 alphanumeric characters and hyphens “-” (2D h) can be used.

The combined order number and sample number must be unique, or the order cannot be accepted.

12) 8.4.26 Report Type

The message's report type.

[Host computer → U-WAM]

O([4f]h): New order

[U-WAM → Host computer]

F: Final Result (Fixed: U-WAM always outputs final result data)

4.3.3.4. Analysis Result Record

[Routine analysis results]

For parameters with “S” for the “result type” of “9.3 Universal Test ID”, 2 records worth of RAW data and Main Format result values are output.

[QC analysis results]

For each parameter, 1 record worth of RAW data result values are output.

<Field definitions>

ASTM field	Field name	U-WAM → Host	Max. size (bytes)	Remarks
9.1	Record Type	R	1	Fixed
9.2	Sequence Number	Sequence Number	4	Sequence Number of records
9.3	Universal Test ID	^^^ Parameter Name for Host Transmission^ Analysis Method^ Dilution Ratio^ Result Type^ Rack No.^ Rack Position	^^^ 40^ 1^ 1^ 2^ 6^ 2	
9.4	Data value	Result Value^ Result Format	20^ 10	
9.5	Units	Units	12	
9.6	Reference Range	Not used	-	
9.7	Analysis Result Record Abnormal Flag	A, N, H, >, W	1	<Urine sediment> A: Analysis error N: Normal H: Abnormal judgment >: Retest judgment W: Low reliability <Urine chemistry> A: Analysis error N: Normal W: Low reliability The following flag is output from the U-WAM Ver.00-05 software >: When the “!” mark has been added (Abnormal coloration(strong case)) HH: When the “?” mark has been added (Abnormal coloration(mild case)) H: When the “*” mark has been added (Analysis result is positive)
9.8	Nature of Abnormality Testing	Not used	-	
9.9	Analysis Result Status	Not used	-	
9.10	Date of Change in Instrument Normative Values or Units	Not used	-	
9.11	Operator ID	^^Logon User ID^ Logon User Name	^^10^ 20	
9.12	Date/Time Test Started	Not used	-	

ASTM field	Field name	U-WAM → Host	Max. size (bytes)	Remarks
9.13	Date/Time Test Completed	YYYYMMDD HHMMSS	14	
9.14	Instrument ID	Instrument Name	12	

<Detailed explanation of fields>

1) 9.2 Sequence Number

The sequence number starts at 1 and indicates the sequence position in which the record appeared in the message. This number is reset to 1 when a higher-level record appears in the message.

2) 9.3 Universal Test ID

Parameter Name for Host Transmission:

Set the name of the parameter.

For parameter names that are set, refer to “Appendix F. Parameter Names for Host Transmission”.

Analysis Method: Registration origin of the analysis results.

A: Instrument

M: Manual input

Dilution Ratio: “1” (fixed)

Result Type: Type of analysis parameter of result.

S: Reportable parameter, research parameter, research information

RC: Review comment[*1]

IF: Scatter image[*2]

Rack No.: Rack number used for analysis. Maximum 6 digits, right aligned, front is space padded.

Rack Position: Position in rack used for analysis.

Number from 1 to 10. Left aligned. Not padded with zeros or spaces at front or back.

3) 9.4 Data Value

Result Value: Result value of analysis parameter set in “9.3 Universal Test ID”.

The result value of “Result Format” is set.

When the “Result Type” of “9.3 Universal Test ID” is “IF”, the shared file name of the image file is set. The format of the shared file name is “(date folder)/(scatter image file name)”.*3

Blank when “Result Type” of “9.3 Universal Test ID” is “RC”. (A review comment in the result message means that a review comment has been issued. This is not output in the message when a review comment has not been issued.)

Result Format: Indicates the format of the result value. Either of the following 2 values is set.

RAW: Raw data

MAIN FORMAT: Main format

*This field is always “RAW” when “Result Type” of “9.3 Universal Test ID” is “RC” or “IF”.

In case of urine chemistry, result is set as the following by display setting and measurement mode(normal measurement or QC measurement).

<Normal measurement>

In case display setting is qualitative value or concentration value.

RAW: Qualitative value

MAINFORMAT: Concentration value

In case display setting is reflectivity.

RAW: Reflectivity1

MAINFORMAT: Reflectivity2

<QC measurement>

In case QC item setting is qualitative value or concentration value.

RAW: Qualitative value

MAINFORMAT: Concentration value

In case QC item setting is reflectivity.

RAW: Reflectivity1

MAINFORMAT: Reflectivity2 (There is a case where the data value is not output by setting and items.)

4) 9.5 Units*4

Result value units of analysis parameter set in “9.3 Universal Test ID”.

The “Result Value” of “9.4 Data Value” is expressed in these units.

5) 9.7 Result Abnormal Flag

Flag output from analyzer. (Not output for QC results.)

6) 9.11 Operator ID

ID of logged-on user who approved the result value.

7) 9.13 Date/Time Test Completed

The date and time the test was completed.

8) 9.14 Instrument ID

Name of analyzer used for analysis.

For analysis results of routine samples, the analyzer name is set.

For QC results, the serial number of the analyzer is set.

The ID is fixed in the following cases:

Manually entered result value: “ENTERED”

*1: For review comments that are output, refer to “Appendix D. Review Comments”.

*2: For scatter images that are output, refer to “Appendix E. Scatter Images”.

*3: For the method for acquiring scatter images at the host computer, refer to “Appendix G. Shared Folder for Scatter Images”.

*4: For the set units, refer to the “Units” column of the tables in “Appendix B. Analysis Parameters”. For urine sediment, body fluid, and particle classification, units set for Main Format may be different from the “Units” column of the tables in “Appendix B. Analysis Parameters”. Refer to “Appendix H. Units”.

4.3.3.5. Comment Record (Report Comments, Patient Comments, Sample Comments)

<Field definitions>

ASTM field	Field name	Host → U-WAM	U-WAM → Host	Max. size (bytes)	Remarks
10.1	Record Type	C	C	1	Fixed
10.2	Sequence Number	Sequence Number	Sequence Number	4	Sequence Number of records
10.3	Comment Source	Not used	Not used	-	
10.4	Comment Text	Comment Type^ Comment	Comment Type^ Comment	1^ [Report comment]: 100 [Patient comment]: 100 [Sample comment]: 40	
10.5	Comment Type	Not used	Not used	-	

<Detailed explanation of fields>

1) 10.2 Sequence Number

The sequence number starts at 1 and indicates the sequence position in which the record appeared in the message. This number is reset to 1 when a higher-level record appears in the message.

2) 10.4 Comment Text

Comment Type: Indicates the comment type.

(None): Report comment

P: Patient comment

S: Sample comment

Comment: Expresses a comment.

Any characters can be used for a report comment. Maximum 100 characters.

Any characters can be used for a patient comment. Maximum 100 characters.

Any characters can be used for a sample comment. Maximum 40 characters.

4.3.3.6. Inquiry record

<Field definitions>

ASTM field	Field name	U-WAM → Host	Host → U-WAM	Max. size (bytes)	Remarks
11.1.1	Record Type	Q	Not used	1	Fixed
11.1.2	Sequence Number	Sequence No.	Not used	4	Sequence Number of records
11.1.3	Starting Range ID Number	Sample No.	Not used	22	
11.1.4	Ending Range ID Number	Not used	Not used	-	
11.1.5	Universal Test ID	Not used	Not used	-	
11.1.6	Range of Request Time Limits	Not used	Not used	-	
11.1.7	Starting Date & Time of Results Request	YYYYMMDDHHMMSS	Not used	14	Date & Time when a inquiry is sent
11.1.8	Ending Date & Time of Results Request	Not used	Not used	-	
11.1.9	Requesting Physician Name	Not used	Not used	-	
11.1.10	Requesting Physician Telephone Number	Not used	Not used	-	
11.1.11	User Field No. 1	Not used	Not used	-	
11.1.12	User Field No. 2	Not used	Not used	-	
11.1.13	Requested Information Status Codes	Not used	Not used	-	

[Detailed explanation of fields]

1) 11.1.2 Sequence Number

   The sequence number starts at 1 and indicates the sequence position in which the record appeared in the message. This number is reset to 1 when a higher-level record appears in the message.

2) 11.1.3 Starting Range ID Number

   Sample number: 22 extended single-byte characters can be used. When the sample number is less than 22 characters, the number is left-aligned without padding by zeros or spaces before or after the ID.

3) 11.1.7 Starting Date & Time of Results Request

   The format is fixed to “YYYYMMDDHHMMSS”.

   YYYY indicates the year, MM the month, DD the day, HH the hour in 24-hour system (00-23), MM the minute (00-59), and SS the second (00-59).

4.3.3.7. Message Termination Record

<Field definitions>

ASTM field	Field name	Host → U-WAM	U-WAM → Host	Max. size (bytes)	Remarks
12.1	Record type	L	L	1	Fixed
12.2	Sequence Number	1	1	4	Always 1
12.3	Termination Code	N	N	1	N: Terminated normally

5. Example of Communication

5.1. Order information

5.1.1. New order registration

Host	<ENQ>
U-WAM	<ACK>
Host	<STX>1**H|¥^&&|||Host1||||||||LIS2-A2|<CR>**<ETX><CHK1><CHK2><CR><LF>
U-WAM	<ACK>
Host	<STX>2**P|1||P00001||Sample^Ichiro^^^¥Sample^Ichiro||19701130|M|||||ANEG||||** **KIDNEY1||||||IP||||||||||** **<CR>**<ETX><CHK1><CHK2><CR><LF>
U-WAM	<ACK>
Host	<STX>3**C|1||P^Patient Comment<CR>**<ETX><CHK1><CHK2><CR><LF>
U-WAM	<ACK>
Host	<STX>4 **O|1|20150730001||^^^RBC¥^^^WBC¥^^^WBC Clumps¥^^^EC¥^^^Squa.EC¥** **^^^Non SEC¥^^^CAST¥^^^Hy.CAST¥^^^Path.CAST¥^^^BACT¥^^^X'TAL¥** **^^^YLC¥^^^SPERM¥^^^MUCUS¥|A||20150730073000||||N||||Urine-EarlyMorning|** **D00001^Physician^Taro^^^Dr.|01-123-4567|O2015073000000001|||||||O||W00** <ETB><CHK1><CHK2><CR><LF>
U-WAM	<ACK>
Host	<STX>5 **001^East1FWard^04-5678-0123|||C00001^Urology<CR>** <ETX><CHK1><CHK2><CR><LF>
U-WAM	<ACK>
Host	<STX>6**C|1||S^Sample Comment<CR>**<ETX><CHK1><CHK2><CR><LF>
U-WAM	<ACK>
Host	<STX>7**L|1|N<CR>**<ETX><CHK1><CHK2><CR><LF>
U-WAM	<ACK>
Host	<EOT>

5.2. Analysis result information

5.2.1. Urine chemistry analysis results

Sending results of analysis using the urine chemistry analyzer

U-WAM	<ENQ>
Host	<ACK>
U-WAM	<STX>1 **H|¥^&&|||U-WAM^00-03^11001^^^^AU501736|||||||LIS2-A2|20151211180253** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>2 **P|1|||||||U** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>3 **O|1|12345678901234||^^^C-PH¥^^^C-LEU¥^^^C-NIT¥^^^C-PRO¥^^^C-GLU¥^^^C-KET¥^^^C-URO¥^^^C-BIL¥^^^C-COLOR¥^^^C-ColorRANK¥^^^C-CLOUD¥^^^C-CRE¥^^^C-ALB¥^^^C-P/C¥^^^C-A/C¥^^^C-S.G.(Ref)¥^^^C-BLD¥¦R||20151211180241||||N|||20151211180247|*|||||||||** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>4 **F** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>5 **R|1|^^^C-PH^A^1^S^0002^01|7.5^RAW|||N||||^^admin^administrator||20151110105603|UC_3500** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>6 **R|2|^^^C-PH^A^1^S^0002^01|7.5^MAINFORMAT|||N||||^^admin^administrator||20151110105603|UC_3500** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>7 **R|3|^^^C-LEU^A^1^S^0002^01|500^RAW|/µl||N||||^^admin^administrator||20151110105603|UC_3500** **<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>0 **R|4|^^^C-LEU^A^1^S^0002^01|3+^MAINFORMAT|||N||||^^admin^administrator||20151110105603|UC_3500** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
	(...omitted...)
U-WAM	<STX>3 **R|31|^^^C-S.G.(Ref)^A^1^S^0002^01|1.009^RAW|||N||||^^admin^administrator||20151110105603|UC_3500** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>4 **R|32|^^^C-S.G.(Ref)^A^1^S^0002^01|1.009^MAINFORMAT|||N||||^^admin^administrator||20151110105603|UC_3500** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
	<STX>5 **R|33|^^^C-**

	BLD^A^1^S^0002^01|0.75^RAW|mg/dL||N||||^^admin^administrator||20151110105603|UC_3500 <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
	<STX>6 **R|34|^^^C-BLD^A^1^S^0002^01|3+^MAINFORMAT|||N||||^^admin^administrator||20151110105603|UC_3500** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>5 **L|1|N&CR&ETX08** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<EOT>

5.2.2. Urine sediment analysis results

Sending results of analysis using the UF-5000 analyzer

U-WAM	<ENQ>
Host	<ACK>
U-WAM	<STX>1**H|¥^&&|||U-WAM^00-03^11001^^^^AU501736|||||||LIS2-A2|20150804141533** **<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>2**P|1||P00055||Sample^Goro¥Sample^Goro¥|19330914|M|||||APOS|||||||||OP** **<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>3 **O|1|20150800055||^^^RBC¥^^^WBC¥^^^WBC Clumps¥^^^EC¥^^^Squa.EC¥^^^Non SEC¥^^^CAST¥^^^Hy.CAST¥^^^Path.CAST¥^^^BACT¥^^^X'TAL¥^^^YLC¥^^^SPERM¥^^^MUCUS¥^^^HIST_SF_FSC_P¥^^^CW_FLL_AxCW_FSC_W¥^^^CW_FLH_PxCW_FSC_P¥^^^CW_SSH_AxCW_FSC_W¥^^^SF_DSS_PxS** <ETB><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>4 **F_FSC_P¥^^^CB_FLH_PxCB_FSC_P¥^^^SF_FLL_WxSF_FLL_A¥|A||20150731073054|||N|||20150731101621|Urine-EarlyMorning|D00001^Physician^Taro||O2015073100000055|||||||F||W00001^East1FWard|||C00001^Urology** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>5**R|1|^^^RBC^A^1^S^000003^6|0.3^RAW|µl||N||||^^admin^administrator||20150804141233|UF_5000** **<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>6**R|2|^^^RBC^A^1^S^000003^6|0.3^MAINFORMAT|/µl||N||||^^admin^administrator||20150804141233|UF_5000** **<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>7**R|3|^^^WBC^A^1^S^000003^6|0.0^RAW|µl||N||||^^admin^administrator||20150804141233|UF_5000** **<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>0**R|4|^^^WBC^A^1^S^000003^6|0.0^MAINFORMAT|/µl||N||||^^admin^administrator||20150804141233|UF_5000** **<CR>**<ETX><CHK1><CHK2><CR><LF>
	(...omitted...)
U-WAM	<STX>0**R|23|^^^RBC-Info.^A^1^S^000001^1|0^RAW|||||||^^admin^administrator||201**

	50804141233|UF_5000 **<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>1**R|24|^^^RBC-Info.^A^1^S^000001^1|0^MAINFORMAT|||||||^^admin^administrator||20150804141233|UF_5000** **<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
	(...omitted...)
U-WAM	<STX>0**R|26|^^^RC_USER_1^A^1^RC^000003^6|^RAW|||>||||^^admin^administrator||20150804141233|UF_5000** **<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>1**R|27|^^^RC_DC^A^1^RC^000003^6|^RAW|||>||||^^admin^administrator||20150804141233|UF_5000** **<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
	(...omitted...)
U-WAM	<STX>1**R|29|^^^HIST_SF_FSC_P^A^1^IF^000003^6|20150804&&R&&PNG&&E&&R&&E&&[UF-5000&&S&&11001]&&E&&[20150804_141233]&&E&&R&&E&&[20150800055]_[HIST_SF_FSC_P].png^RAW|||||||^^admin^administrator||20150804141233|UF_5000** **<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>2**R|30|^^^CW_FLL_AxCW_FSC_W^A^1^IF^000003^6|20150804&&R&&PNG&&E&&R&&E&&[UF-5000&&S&&11001]&&E&&[20150804_141233]&&E&&R&&E&&[20150800055]_[CW_FLL_AxCW_FSC_W].png^RAW|||||||^^admin^administrator||20150804141233|UF_5000** **<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>3**R|31|^^^CW_FLH_PxCW_FSC_P^A^1^IF^000003^6|20150804&&R&&PNG&&E&&R&&E&&[UF-5000&&S&&11001]&&E&&[20150804_141233]&&E&&R&&E&&[20150800055]_[CW_FLH_PxCW_FSC_P].png^RAW|||||||^^admin^administrator||20150804141233|UF_5000** **<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
	(...omitted...)
U-WAM	<STX>7**R|35|^^^SF_FLL_WxSF_FLL_A^A^1^IF^000003^6|20150804&&R&&PNG&&E&&R&&E&&[UF-5000&&S&&11001]&&E&&[20150804_141233]&&E&&R&&E&&[20150800055]_[SF_FLL_WxSF_FLL_A].png^RAW|||||||^^admin^administrator||20150804141233|UF_5000** **<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>0**L|1|N<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<EOT>

5.2.3. Visual examination results

Sending results of visual examination using U-WAM

U-WAM	<ENQ>
Host	<ACK>
U-WAM	<STX>1 **H|¥^&&|||U-WAM^00-03^11001^^^^AU501736|||||||LIS2-A2|20151209170319** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>2**P|1||1||Test^Ur¥Test^Ur¥||20130116|M|||||APOS** **<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>3 **O|1|0000000369||^^^RBC¥^^^WBC¥^^^WBC Clumps¥^^^EC¥^^^Squa.EC¥^^^M-OFB ¥^^^M-Atyp. C¥^^^Hy.CAST¥^^^MUCUS¥^^^BACT¥^^^YLC¥^^^M-Trichomonas¥^^ ^SPERM¥^^^Non SEC¥^^^CAST¥^^^Path.CAST¥^^^X'TAL¥|R||20151209095323||||N||| 20151209095520|*|||123||||||** <ETB><CHK1><CHK2><CR><LF>
Host	<ACK>
	<STX>4 **F** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
	<STX>5 **R|1|^^^RBC^M^1^S|<1/HPF^RAW|/HPF||N||||admin^administrator^admin^administra tor||20151209165858|ENTERED** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
	<STX>6 **R|2|^^^RBC^M^1^S|<1/HPF^MAINFORMAT|/HPF||N||||admin^administrator^admin^ administrator||20151209165858|ENTERED** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
	<STX>7 **R|3|^^^WBC^M^1^S|30- 49/HPF^RAW|/HPF||N||||admin^administrator^admin^administrator||20151209165858| ENTERED** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
	<STX>0 **R|4|^^^WBC^M^1^S|30- 49/HPF^MAINFORMAT|/HPF||N||||admin^administrator^admin^administrator||201512 09165858|ENTERED** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>1 **R|5|^^^WBC Clumps^M^1^S|--- ^RAW|||N||||admin^administrator^admin^administrator||20151209165858|ENTERED** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
	(...omitted...)
U-WAM	<STX>7 **R|11|^^^M-OFB^M^1^S|--- ^RAW|||N||||admin^administrator^admin^administrator||20151209165858|ENTERED** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>0 **R|12|^^^M-OFB^M^1^S|--- ^MAINFORMAT|||N||||admin^administrator^admin^administrator||20151209165858|EN TERED** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>

U-WAM	<STX>1 **R|13|^^^M-Atyp. C^M^1^S|---^RAW|||N||||admin^administrator^admin^administrator||20151209165858|ENTERED** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
	(...omitted...)
U-WAM	<STX>5 **R|33|^^^X'TAL^M^1^S|--- ^RAW|||N||||admin^administrator^admin^administrator||20151209165858|ENTERED** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>6 **R|34|^^^X'TAL^M^1^S|--- ^MAINFORMAT|||N||||admin^administrator^admin^administrator||20151209165858|ENTERED** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>7 **L|1|N** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<EOT>

5.2.4. Particle classification analysis results

Sending results of particle classification using U-WAM

U-WAM	<ENQ>
Host	<ACK>
U-WAM	<STX>1 **H|¥^&&|||U-WAM^00-03^11001^^^^AU501736||||||||LIS2-A2|20151207173125** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>2**P|1|||||||U** **<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>3 **O|1|120111T08UFH-105||^^^P-RBCs¥^^^P-Iso RBCs¥^^^P-WBCs¥^^^P-WBC Clumps¥^^^P-EC¥^^^P-Squa. EC¥^^^P-Tran. EC¥^^^P-RTEC¥^^^P-Columnar EC¥^^^P-OFB¥^^^P-Atyp. C¥^^^P-Hy. Casts¥^^^P-Epith. Casts¥^^^P-Gra. Casts¥^^^P-WAXy Casts¥^^^P-FAT Casts¥^^^** <ETB><CHK1><CHK2><CR><LF>
Host	<ACK>
	<STX>4 **P-RBC Casts¥^^^P-WBC Casts¥^^^P-Mucus¥^^^P-Bacteria¥^^^P-COCCI¥^^^P-RODS¥^^^P-Fungi¥^^^P-Yeast¥^^^P-Trichomonas¥^^^P-Urate¥^^^P-Phosphate¥^^^P-CaOxm X'TAL¥^^^P-UA X'TAL¥^^^P-CaPh X'TAL¥^^^P-Ammoni. MAG.¥^^^P-Ammoni. Biu.¥^^^P-Calc. carbon.¥** <ETB><CHK1><CHK2><CR><LF>
Host	<ACK>
	<STX>5 **^^^P-Bilirubin¥^^^P-Cystine¥^^^P-Sperma¥^^^P-RBC Clumps¥^^^P-Dys RBC¥^^^P-Acanthocytes¥^^^P-MN¥^^^P-PMN¥^^^P-NEUT¥^^^P-LYMPH¥^^^P-EO¥^^^P-MONO¥^^^P-Macrophages¥^^^P-Endometrial¥^^^P-Mesothelial¥^^^P-s-Squa. EC¥^^^P-i/d-Squa. EC¥^^^P-Non-Squ** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
	<STX>6 **am. EC¥^^^P-s-Tran. EC¥^^^P-i/d-Tran. EC¥^^^P-EC clumps¥^^^P-IB¥^^^P-Intranculear¥^^^P-H. papilloma¥^^^P-H. polyoma¥^^^P-Carcinoma¥^^^P-ML¥^^^P-Leukemia¥^^^P-Casts¥^^^P-N-hyal. Casts¥^^^P-VD Cast¥^^^P-Salt/Crystal¥^^^P-Mφ Cast¥^^^P-Hemo Cas** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>

	<STX>7 **t¥^^^P-Myrogl Cast¥^^^P-B-J Cast¥^^^P-Fibrin Casts¥^^^P-Broad Casts¥^^^P-Bact Casts¥^^^P-BIL Cast¥^^^P-Gram.Pos Bact¥^^^P-Gram.Neg Bact¥^^^P-Deform Bact¥^^^P-Filamentous¥^^^P-Parasites¥^^^P-Protozoa¥^^^P-Helminths¥^^^P-Amorph.¥^^^P-Crystals** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
	<STX>0 **¥^^^P-Colesterol¥^^^P-2-8-dihydro.¥^^^P-Tyrosine¥^^^P-Leucine¥^^^P-Drug¥^^^P-Hemosiderin¥^^^P-Amyloid body¥^^^P-fat droplets¥^^^P-Artifacts¥|R||20151207163114||||N|||20151207163121|*||||||||||F|** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>1 **R|1|^^^P-RBCs^M^1^S|<1/HPF^RAW|µl||N||||admin^administrator^admin^administrator||20151207164145|ENTERED** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>2 **R|2|^^^P-RBCs^M^1^S|<1/HPF^MAINFORMAT|/µl||N||||admin^administrator^admin^administrator||20151207164145|ENTERED** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>3 **R|3|^^^P-Iso RBCs^M^1^S|<1/HPF^RAW|µl||N||||admin^administrator^admin^administrator||20151207164145|ENTERED** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>4 **R|4|^^^P-Iso RBCs^M^1^S|<1/HPF^MAINFORMAT|/µl||N||||admin^administrator^admin^administrator||20151207164145|ENTERED** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>5 **R|5|^^^P-WBCs^M^1^S|<1/HPF^RAW|µl||N||||admin^administrator^admin^administrator||20151207164145|ENTERED** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>6 **R|6|^^^P-WBCs^M^1^S|<1/HPF^MAINFORMAT|/µl||N||||admin^administrator^admin^administrator||20151207164145|ENTERED** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
	(...omitted...)
U-WAM	<STX>2 **R|178|^^^P-Amyloid body^M^1^S|-^MAINFORMAT|/µl||N||||admin^administrator^admin^administrator||20151207164145|ENTERED** <CR><ETX><CHK1><CHK2><CR><LF>
U-WAM	<STX>3 **R|179|^^^P-fat droplets^M^1^S|-^RAW|µl||N||||admin^administrator^admin^administrator||20151207164145|ENTERED** <CR><ETX><CHK1><CHK2><CR><LF>
U-WAM	<STX>4 **R|180|^^^P-fat droplets^M^1^S|-^MAINFORMAT|/µl||N||||admin^administrator^admin^administrator||20151207164145|ENTERED** <CR><ETX><CHK1><CHK2><CR><LF>

Host	<ACK>
U-WAM	<STX>5 **R|181|^^^P-Artifacts^M^1^S|-^RAW|µl||N||||admin^administrator^admin^administrator||20151207164145|ENTERED** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>6 **R|182|^^^P-Artifacts^M^1^S|-^MAINFORMAT|/µl||N||||admin^administrator^admin^administrator||20151207164145|ENTERED** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>7 **L|1|N** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<EOT>

5.2.5. Body fluid sample analysis results

Sending results of analysis using the UF-5000 analyzer

U-WAM	<ENQ>
Host	<ACK>
U-WAM	<STX>1**H|¥^&&|||U-WAM^00-03^11001^^^^AU501736|||||||LIS2-A2|20150827121546** **<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>2**P|1||P00001||Sample^Ichiro¥Sample^Ichiro¥|19701130|M|||||ANEG|||||||||IP** **<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>3 **O|1|2015082700000001||^^^RBC-BF¥^^^WBC-BF¥^^^MN#¥^^^MN%%¥^^^PMN#¥^^^PMN%%¥A||20150827073000||||N|||20150827120058|*|D00001^Physician^Taro||O2015082700000001|||||||F||W00001^East1FWard|||C00001^Urology** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>4**R|1|^^^RBC-BF^A^1^S|0.0^RAW|µl||N||||^^device||20150827121025|UF_5000** **<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>5**R|2|^^^RBC-BF^A^1^S|0.0^MAINFORMAT|/µl||N||||^^device||20150827121025|UF_5000** **<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>6**R|3|^^^WBC-BF^A^1^S|0.2^RAW|µl||N||||^^device||20150827121025|UF_5000** **<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>7**R|4|^^^WBC-BF^A^1^S|0.2^MAINFORMAT|/µl||N||||^^device||20150827121025|UF_5000** **<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
	(...omitted...)
U-WAM	<STX>0 **R|13|^^^SF_DSS_PxSF_FSC_P-BF^A^1^IF|20150827&&R&&PNG&R&[UF-5000^11001]&[20150827_121025]&R&[2015082700000001]_[SF_DSS_PxSF_FSC_P].png^RAW||||||^^device||20150827121025|UF_5000** **<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>

U-WAM	<STX>1 **R|14|^^^CW_SSH_AxCW_FSC_W-BF^A^1^IF|20150827&&R&&PNG&R&[UF-5000^11001]&[20150827_121025]&R&[2015082700000001]_[CW_SSH_AxCW_FSC_W].png^RAW|||||||^^device||20150827121025|UF_5000<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>2 **R|15|^^^CW_FLL_AxCW_FSC_W-BF^A^1^IF|20150827&&R&&PNG&R&[UF-5000^11001]&[20150827_121025]&R&[2015082700000001]_[CW_FLL_AxCW_FSC_W].png^RAW|||||||^^device||20150827121025|UF_5000<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
	(...omitted...)
U-WAM	<STX>4 **R|17|^^^CW_SSH_PxCW_FLL_P-BF^A^1^IF|20150827&&R&&PNG&R&[UF-5000^11001]&[20150827_121025]&R&[2015082700000001]_[CW_SSH_PxCW_FLL_P].png^RAW|||||||^^device||20150827121025|UF_5000<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>5**L|1|N<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<EOT>

5.2.6. QC analysis results

Sending results of QC material (UF-CONTROL -L) using the UF-5000 analyzer

U-WAM	<ENQ>
Host	<ACK>
U-WAM	<STX>1**H|¥^&&|||U-WAM^00-03^11001^^^^AU501736||||||||LIS2-A2|20150804104512 <CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>2**P|1<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>3 **O|1|QC-S1504A||^^^RBC¥^^^WBC¥^^^EC¥^^^CAST¥^^^BACT¥^^^Cond.¥||||||Q||||||||||||F** <CR><ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>4**R|1|^^^RBC^^1^S|41.8^RAW|µl||||||||20150804103735|11001 <CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>5**R|2|^^^WBC^^1^S|40.9^RAW|µl||||||||20150804103735|11001 <CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>6**R|3|^^^EC^^1^S|6.7^RAW|µl||||||||20150804103735|11001 <CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>7**R|4|^^^CAST^^1^S|1.96^RAW|µl||||||||20150804103735|11001 <CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
	(...omitted...)
U-WAM	<STX>2 **R|7|^^^CB_FLH_PxCB_FSC_P^^1^IF|20150804&&R&&PNG&&E&&R&&E&&[UF-5000&&S&&11001]&&E&&[20150804_103735]&&E&&R&&E&&[QC-S1504ALL]_[CB_FLH_PxCB_FSC_P].png||||||||20150804103735|11001 <CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>3 **R|8|^^^CW_SSH_AxCW_FSC_W^^1^IF|20150804&&R&&PNG&&E&&R&&E&&[UF-5000&&S&&11001]&&E&&[20150804_103735]&&E&&R&&E&&[QC-S1504ALL]_[CW_SSH_AxCW_FSC_W].png||||||||20150804103735|11001 <CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>4 **R|9|^^^SF_DSS_PxSF_FSC_P^^1^IF|20150804&&R&&PNG&&E&&R&&E&&[UF-5000&&S&&11001]&&E&&[20150804_103735]&&E&&R&&E&&[QC-S1504ALL]_[SF_DSS_PxSF_FSC_P].png||||||||20150804103735|11001 <CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>5 **R|10|^^^SF_FLL_WxSF_FLL_A^^1^IF|20150804&&R&&PNG&&E&&R&&E&&[UF-5000&&S&&11001]&&E&&[20150804_103735]&&E&&R&&E&&[QC-S1504ALL]_[SF_FLL_WxSF_FLL_A].png||||||||20150804103735|11001 <CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<STX>6**L|1|N<CR>**<ETX><CHK1><CHK2><CR><LF>
Host	<ACK>
U-WAM	<EOT>

Sending results of QC material (qualitative and concentration value) using the chemistry analyzer.

U-WAM	<ENQ>
Host	<ACK>
U-WAM	<STX>1H|¥^&|||U-WAM^00-05_Build007^11001^^^^AU501736|||||||LIS2-A2|20160608175033<CR><ETX>6B<CR><LF>
Host	<ACK>
U-WAM	<STX>2P|1<CR><ETX>3F<CR><LF>
Host	<ACK>
U-WAM	<STX>3O|1|QC-UCC91603||||||||Q||||||||||||F<CR><ETX>15<CR><LF>
Host	<ACK>
U-WAM	<STX>4R|1|^^^URO^^1^S|2+^RAW||||||||20160608131951|59<CR><ETX>9F<CR><LF>
Host	<ACK>
U-WAM	<STX>5R|2|^^^URO^^1^S|4.0^MAINFORMAT|mg/dL|||||||20160608131951|59<CR><ETX>8D<CR><LF>
Host	<ACK>
U-WAM	<STX>6R|3|^^^BLD_H^^1^S|2+^RAW||||||||20160608131951|59<CR><ETX>26<CR><LF>
Host	<ACK>
U-WAM	<STX>7R|4|^^^BLD_H^^1^S|0.15^MAINFORMAT|mg/dL|||||||20160608131951|59<CR><ETX>46<CR><LF>
Host	<ACK>
U-WAM	<STX>0R|5|^^^BIL^^1^S|3+^RAW||||||||20160608131951|59<CR><ETX>81<CR><LF>
Host	<ACK>
U-WAM	<STX>1R|6|^^^BIL^^1^S|2.0^MAINFORMAT|mg/dL|||||||20160608131951|59<CR><ETX>6C<CR><LF>
Host	<ACK>
U-WAM	<STX>2R|7|^^^KET^^1^S|2+^RAW||||||||20160608131951|59<CR><ETX>91<CR><LF>
Host	<ACK>
U-WAM	<STX>3R|8|^^^KET^^1^S|30^MAINFORMAT|mg/dL|||||||20160608131951|59<CR><ETX>50<CR><LF>
	(...omitted...)
U-WAM	<STX>2R|23|^^^S.G.(Ref)^^1^S|^RAW||||||||20160608131951|59<CR><ETX>E2<CR><LF>
Host	<ACK>
U-WAM	<STX>3R|24|^^^S.G.(Ref)^^1^S|1.024^MAINFORMAT||||||||20160608131951|59<CR><ETX>DD<CR><LF>
Host	<ACK>
U-WAM	<STX>4L|1|N<CR><ETX>07<CR><LF>
Host	<ACK>
U-WAM	<EOT>

Sending results of QC material (reflectivity value) using the chemistry analyzer

U-WAM	<ENQ>
Host	<ACK>
U-WAM	<STX>1H|¥^&|||U-WAM^00-05_Build007^11001^^^^AU501736|||||||LIS2-A2|20160607175737<CR><ETX>75<CR><LF>
Host	<ACK>
U-WAM	<STX>2P|1<CR><ETX>3F<CR><LF>
Host	<ACK>
U-WAM	<STX>3O|1|QC-UCC91603||||||||Q||||||||||||F<CR><ETX>15<CR><LF>
Host	<ACK>
U-WAM	<STX>4R|1|^^^URO^^1^S|67.800^RAW|%|||||||20160607173829|59<CR><ETX>A3<CR><LF>
Host	<ACK>
U-WAM	<STX>5R|2|^^^URO^^1^S|^MAINFORMAT|%|||||||20160607173829|59<CR><ETX>76<CR><LF>
Host	<ACK>
U-WAM	<STX>6R|3|^^^BLD_H^^1^S|18.800^RAW|%|||||||20160607173829|59<CR><ETX>26<CR><LF>
Host	<ACK>
U-WAM	<STX>7R|4|^^^BLD_H^^1^S|^MAINFORMAT|%|||||||20160607173829|59<CR><ETX>FD<CR><LF>
Host	<ACK>
U-WAM	<STX>0R|5|^^^BIL^^1^S|81.400^RAW|%|||||||20160607173829|59<CR><ETX>7C<CR><LF>
Host	<ACK>
U-WAM	<STX>1R|6|^^^BIL^^1^S|87.800^MAINFORMAT|%|||||||20160607173829|59<CR><ETX>8C<CR><LF>
Host	<ACK>
U-WAM	<STX>2R|7|^^^KET^^1^S|79.900^RAW|%|||||||20160607173829|59<CR><ETX>99<CR><LF>
Host	<ACK>
U-WAM	<STX>3R|8|^^^KET^^1^S|^MAINFORMAT|%|||||||20160607173829|59<CR><ETX>68<CR><LF>
	(...omitted...)
U-WAM	<STX>2R|23|^^^S.G.(Ref)^^1^S|^RAW||||||||20160607173829|59<CR><ETX>EB<CR><LF>
Host	<ACK>
U-WAM	<STX>3R|24|^^^S.G.(Ref)^^1^S|1.024^MAINFORMAT||||||||20160607173829|59<CR><ETX>E6<CR><LF>
Host	<ACK>
U-WAM	<STX>4L|1|N<CR><ETX>07<CR><LF>
Host	<ACK>
U-WAM	<EOT>

Appendix A. TCP/IP Communication

A.1 Software

1) Data link/ Network/ Transport layer

The IP address of the host computer is set in the user settings screen of U-WAM.

The TCP port number used for communications with the host computer is set to 6001 by default. The port number can be changed in the user settings screen of U-WAM.

2) Session layer

To establish the connection, the host computer acts as a server and the IPU acts as a client. U-WAM confirms the connection at the time of startup. If connection fails, reconnection attempts will be made at a set interval.

Appendix B. Analysis Parameters

The tables below show the analysis parameters managed by U-WAM. To send an order registration instruction from the host computer to U-WAM, set the information in the “Parameter ID” column of the tables below. However, for urine sediment or body fluids, the parameters that can be requested in the order sent from the host computer to U-WAM vary depending on the country/region and the type of analyzer connected to U-WAM. (There is no need to request QC parameters.)

Parameters that can be requested are indicated by “○”.

* Even for parameters that can be requested, order registration is not possible when the parameter is disabled in U-WAM settings.

B.1 Urine Chemistry (Profile: Chemistry)

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data					
							Result value type (reflectance)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value*2	Units	Data value*2	Units	Data value*2	Units
Urobilinogen	C-URO	URO	○	○	○	○	0.0 to 999.9*1	%	"Customary units" normal, 2.0, 4.0, 8.0, 12.0 "SI units" normal, 34.0, 68.0, 135.0, 202.0	"Customary units" mg/dL "SI units" µmol/L	normal,1+,2+,3+,4+	
Occult Blood (hemoglobin)	C-BLD	BLD	○	○	○	○	0.0 to 999.9*1	%	"Customary units, SI units" 0.03, 0.06, 0.15, 0.75	"Customary units, SI units" mg/dL	-, +-, 1+, 2+, 3+	
Occult blood (red blood cells)	C-BLD	BLD	○	○	○	○	0.0 to 999.9*1	%	"Customary units, SI units" 10, 20, 50, 250	"Customary units, SI units" c/µl	-, +-, 1+, 2+, 3+	
Bilirubin	C-BIL	BIL	○	○	○	○	0.0 to 999.9*1	%	"Customary units" 0.5, 1.0, 2.0 "SI units" 8.6, 17.0, 34.0	"Customary units" mg/dL "SI units" µmol/L	-, 1+, 2+, 3+	
Ketone body	C-KET	KET	○	○	○	○	0.0 to 999.9*1	%	"Customary units" 10, 30, 80 "SI units" 0.93, 2.8, 7.4	"Customary units" mg/dL "SI units" mmol/L	-, 1+, 2+, 3+	

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data					
			Japan	North America	China	Other	Result value type (reflectance)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value*2	Units	Data value*2	Units	Data value*2	Units
Glucose	C-GLU	GLU	○	○	○	○	0.0 to 999.9*1	%	"Customary units" 50, 100, 250, 500, 2000 "SI units" 2.8, 5.6, 14, 28, 111	"Customary units" mg/dL "SI units" mmol/L	-, +-, 1+, 2+, 3+, 4+	
Protein	C-PRO	PRO	○	○	○	○	0.0 to 999.9*1	%	"Customary units" 15, 30, 100, 300, 1000 "SI units" 0.15, 0.3, 1.0, 3.0, 10	"Customary units" mg/dL "SI units" g/L	-, +-, 1+, 2+, 3+, 4+	
pH	C-PH	PH	○	○	○	○	0.0 to 999.9*1	%			5.0 to 9.0	
Nitrite	C-NIT	NIT	○	○	○	○	0.0 to 999.9*1	%			-, +	
Leukocyte	C-LEU	LEU	○	○	○	○	0.0 to 999.9*1	%	25, 75, 500	"Customary units, SI units" c/µl	-, 1+, 2+, 3+	
Creatinine	C-CRE	CRE	○	○	○	○	0.0 to 999.9*1	%	"Customary units" 10, 50, 100, 200, 300 "SI units" 0.1, 0.5, 1.0, 2.0, 3.0	"Customary units" mg/dL "SI units" g/L		

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data					
			Japan	North America	China	Other	Result value type (reflectance)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value*2	Units	Data value*2	Units	Data value*2	Units
Albumin	C-ALB	ALB	○	○	○	○	0.0 to 999.9*1	%	"Customary units" 10, 30, 80, 150, over "SI units" 0.01, 0.03, 0.08, 0.15, over	"Customary units" mg/dL "SI units" g/L		
Ratio of protein and creatinine	C-P/C	P/C	○	○	○	○			"Customary units, SI units" 0.15, 0.30, >= 0.50	"Customary units, SI units" g/gCr	Dilute, normal, 1+, 2+	
Ratio of albumin and creatinine	C-A/C	A/C	○	○	○	○			"Customary units, SI units" 30, 80, 150, >=300	"Customary units, SI units" mg/gCr	Dilute, normal, 1+, 2+	
Specific gravity (Ref)	C-S.G.(Ref)	S.G.(Ref)	○	○	○	○					1.000 to 1.050	
Urine color	C-COLOR	COLOR	○	○	○	○					OTHER 00 L YELLOW 01 STRAW 02 YELLOW 03 AMBER 04 RED 05 DK BROWN 06	
Urine color rank	C-ColorRANK	ColorRANK	○	○	○	○					"ABCD"*1 "A": 0 to 4 "B": 0 to 4	

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data					
							Result value type (reflectance)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value*2	Units	Data value*2	Units	Data value*2	Units
											“C”: 0 to 4 “D”: 0 to 2	
Cloudiness	C-CLOUD	CLOUD	○	○	○	○					-, 1+, 2+, 3+	

<Notes>

*1: For North America, reflectance and urine color rank codes are not output.

*2: When an analysis error occurs on the urine chemistry analyzer, the result value (refer to ASTM field 9.4) of a target parameter may become blank and be sent to the host computer.

* Depending on a connected urine chemistry analyzer, available parameters and result value types may vary.

* For urine chemistry, result value information to be set in “RAW” or “MAINFORMAT” of the result format (refer to ASTM field 9.4) differs depending on the setting of U-WAM.

Result value types applicable to result format “RAW”: “Qualitative” or “Semi-quantitative (customary units)”

Result value types applicable to result format “MAINFORMAT”: “Qualitative”, “Semi-quantitative (customary units)”, “Semi-quantitative (SI units)”, or “Reflectance”

* According to orders, U-WAM determines a test paper and sends an order to a connected urine chemistry analyzer.

* Although the occult blood (BLD) is handled as a single parameter, the urine chemistry analyzer automatically detects hemoglobin and red blood cells and outputs the result values. To separately store each result value on the system, refer to Units (ASTM field 9.5). (Different units are used for hemoglobin and red blood cells.)

B.2 Urine Sediment (Profile: UF)

<UF-3000 Reportable Parameters>

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data					
							Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
Red blood cells	RBC	RBC	○	○	○	○	0.0 to 99999.9	/μL				
White blood cells	WBC	WBC	○	○	○	○	0.0 to 99999.9	/μL				
Epithelial cells	EC	EC	○	○	○	○	0.0 to 99999.9	/μL				
Casts	CAST	CAST	○	○	○	○	0.00 to 9999.99	/μL				
Bacteria	BACT	BACT	○	○	○	○	0.0 to 99999.9	/μL				

<UF-3000 Research Parameters>

Full name		Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data					
								Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
				Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
Red blood cells	Non-hemolyzed red blood cells	~NL RBC	*4	○ *5	○ *5	○ *5	○ *5	0.0 to 99999.9	/μL				
	Hemolyzed red blood cells	~Lysed RBC	*4	○ *5	○ *5	○ *5	○ *5	0.0 to 99999.9	/uL				
Epithelial cells	Small circular epithelial	~SRC	*4	○ *5		○ *5	○ *5	0.0 to 99999.9	/μL				
Casts	Pathological casts	~Path.CAST	*4	○ *5	○ *5	○ *5	○ *5	0.00 to 9999.99	/μL				
Crystal		~X''TAL	*4	○ *5	○ *5	○ *5	○ *5	0.0 to 99999.9	/uL				
Yeast		~YLC	*4	○ *5	○ *5	○ *5	○ *5	0.0 to 99999.9	/uL				
Sperm		~SPERM	*4	○ *5	○ *5	○ *5	○ *5	0.0 to 99999.9	/uL				
Mucus		~MUCUS	*4	○ *5	○ *5	○ *5	○ *5	0.00 to 9999.99	/uL				
Urine conductivity		~Cond.	*4	○ *5	○ *5	○ *5	○ *5	0.0 to 99.9	mS/cm				
SF Total Count		~SF_TC	*4	○ *5	○ *5	○ *5	○ *5	0 to 999999	count				
CW Total Count		~CW_TC	*4	○ *5	○ *5	○ *5	○ *5	0 to 999999	count				
CB Total Count		~CB_TC	*4	○ *5	○ *5	○ *5	○ *5	0 to 999999	count				
SF Others		~SF_OTHERS	*4	○ *5	○ *5	○ *5	○ *5	0.0 to 99999.9	/uL				
CW Others		~CW_OTHERS	*4	○ *5	○ *5	○ *5	○ *5	0.0 to 99999.9	/uL				
DEBRIS		~DEBRIS	*4	○ *5	○ *5	○ *5	○ *5	0.0 to 99999.9	/uL				

<UF-4000/5000 Reportable Parameters>

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data					
							Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
Red blood cells	RBC	RBC	○	○	○	○	0.0 to 99999.9	/μL				
Non-hemolyzed red blood cells	NL RBC	NL RBC				○	0.0 to 99999.9	/μL				
White blood cells	WBC	WBC	○	○	○	○	0.0 to 99999.9	/μL				
White blood cell clumps	WBC Clumps	WBC Clumps	○ *2		○ *2	○	0.0 to 99999.9	/μL			-, +, 2+, 3+, 4+, 5+, 6+, 7+, 8+	
Epithelial cells	EC	EC	○	○	○	○	0.0 to 99999.9	/μL				
Squamous cells	Squa.EC	Squa.EC	○		○	○	0.0 to 99999.9	/μL				
Non-squamous epithelial cells	Non SEC	Non SEC	○ *3		○ *3	○	0.0 to 99999.9	/μL	xxxx.x – yyyy.y	/μL		
Urothelial cells	Tran.EC	Tran.EC				○	0.0 to 99999.9	/μL				
Tubular epithelial cells	RTEC	RTEC				○	0.0 to 99999.9	/μL				
Casts	CAST	CAST	○	○	○	○	0.00 to 9999.99	/μL				
Hyaline casts	Hy.CAST	Hy.CAST	○ *3		○ *3	○	0.00 to 9999.99	/μL	xxxx.x – yyyy.y	/μL		
Pathological casts	Path.CAST	Path.CAST	○ *3	○ *1	○ *3	○	0.00 to 9999.99	/μL	xxxx.x – yyyy.y	/μL		
Bacteria	BACT	BACT	○	○	○	○	0.0 to 99999.9	/μL				
Crystal	X'TAL	X'TAL	○ *3	○ *1	○ *3	○	0.0 to 99999.9	/μL	xxxx.x – yyyy.y	/μL		
Yeast	YLC	YLC	○ *3	○ *1	○ *3	○	0.0 to 99999.9	/μL	xxxx.x – yyyy.y	/μL		
Sperm	SPERM	SPERM	○ *3	○ *1	○ *3	○	0.0 to 99999.9	/μL	xxxx.x – yyyy.y	/μL		
Mucus	MUCUS	MUCUS	○ *2	○ *1	○ *2	○	0.00 to 9999.99	/μL			-, +, 2+, 3+, 4+, 5+, 6+, 7+, 8+	

<UF-4000/5000 Research Parameters>

Full name		Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data					
								Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
				Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
Red blood cells	Non-hemolyzed red blood cells	~NL RBC	*4	○ *5	○ *5	○ *5		0.0 to 99999.9	/μL				
	Hemolyzed red blood cells	~Lysed RBC	*4	○ *5	○ *5	○ *5	○ *5	0.0 to 99999.9	/uL				
White blood cells	White blood cell clumps	~WBC Clumps	*4	○ *5	○ *5			0.0 to 99999.9	/μL				
Epithelial cells	Squamous epithelial cells	~Squa.EC	*4		○ *5			0.0 to 99999.9	/μL				
	Non-squamous epithelial cells	~Non SEC	*4	○ *5	○ *5			0.0 to 99999.9	/μL				
	Urothelial cells	~Tran.EC	*4	○ *5	○ *5	○ *5		0.0 to 99999.9	/μL				
	Tubular epithelial cells	~RTEC	*4	○ *5	○ *5	○ *5		0.0 to 99999.9	/μL				
	Small circular epithelial	~SRC	*4	○ *5		○ *5	○ *5	0.0 to 99999.9	/μL				
Casts	Hyaline casts	~Hy.CAST	*4	○ *5	○ *5			0.00 to 9999.99	/μL				
	Pathological casts	~Path.CAST	*4	○ *5	○ *5			0.00 to 9999.99	/μL				
Crystal		~X”TAL	*4	○ *5	○ *5			0.0 to 99999.9	/uL				
Yeast		~YLC	*4	○ *5	○ *5			0.0 to 99999.9	/uL				
Sperm		~SPERM	*4	○ *5	○ *5			0.0 to 99999.9	/uL				

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data					
			Japan	North [illegible]	China	Other	Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value	Units	Data value	Units	Data value	Units
Mucus	~MUCUS	*4	○ *5	○ *5			0.00 to 9999.99	/uL				
Urine conductivity	~Cond.	*4	○ *5	○ *5	○ *5	○ *5	0.0 to 99.9	mS/cm				
Osmotic pressure	~Osmo.	*4	○ *5	○ *5	○ *5	○ *5	0 to 99999	mOsm/kg				
SF Total Count	~SF_TC	*4	○ *5	○ *5	○ *5	○ *5	0 to 999999	count				
CW Total Count	~CW_TC	*4	○ *5	○ *5	○ *5	○ *5	0 to 999999	count				
CB Total Count	~CB_TC	*4	○ *5	○ *5	○ *5	○ *5	0 to 999999	count				
SF Others	~SF_OTHERS	*4	○ *5	○ *5	○ *5	○ *5	0.0 to 99999.9	/uL				
CW Others	~CW_OTHERS	*4	○ *5	○ *5	○ *5	○ *5	0.0 to 99999.9	/uL				
DEBRIS	~DEBRIS	*4	○ *5	○ *5	○ *5	○ *5	0.0 to 99999.9	/uL				

<Notes>

*1: Only a result abnormal flag is output. (The result value is not output.)

*2: The result type of RAW data is Qualitative.

*3: The result type of RAW data is Semi-quantitative.

*4: Research parameter orders cannot be registered to U-WAM from the host computer.

*5: Research parameters may not be output depending on the setting of U-WAM.

* The result value type of RAW data is Quantitative unless otherwise specified.

* For urine sediment, when the result type of RAW data is Qualitative, Main Format of the result format can be changed based on the result value

information.

Units that can be used in the result format vary by parameters. (For the available units, refer to “Appendix H. Units”.)

* When an analysis error occurs on the urine sediment analyzer, “----” may be set in the result value (refer to ASTM field 9.4) of a target parameter and the result value is sent to the host computer.

B.3 Visual examination (Profile: Visual)

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
							Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
RBCs	M-RBCs	M-RBCs	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Isomorphic RBC	M-Iso RBCs	M-Iso RBCs	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
WBCs	M-WBCs	M-WBCs	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
WBC clumps	M-WBC Clumps	M-WBC Clumps	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
							Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
Epithelial cells	M-EC	M-EC	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Squamous epithelial cells	M-Squa.EC	M-Squa.EC	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Transitional (Urothelial) epithelial cells	M-Tran. EC	M-Tran. EC	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Rental tubular epithelial cells	M-RTEC	M-RTEC	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
			Japan	North America	China	Other	Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value	Units	Data value	Units	Data value	Units
Columnar epithelial cells	M-Columnar EC	M-Columnar EC	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Oval fat bodies	M-OFB	M-OFB	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Atypical cells	M-Atyp. C	M-Atyp. C	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Hyaline casts	M-Hy. Casts	M-Hy. Casts	○	○	○	○			"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF, 1-/LPF,		-, 1+, 2+, 3+, 4+,	

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
			Japan	North America	China	Other	Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value	Units	Data value	Units	Data value	Units
									10-/LPF, 100-/LPF,			
Epithelial casts	M-Epith. casts	M-Epith. casts	○	○	○	○			“WF” 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, “LPF” 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
Granular casts	M-Gra. Casts	M-Gra. Casts	○	○	○	○			“WF” 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, “LPF” 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
Waxy casts	M-WAXy Casts	M-WAXy Casts	○	○	○	○			“WF” 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, “LPF” 0/LPF, <1/LPF,		-, 1+, 2+, 3+, 4+,	

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
			Japan	North America	China	Other	Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value	Units	Data value	Units	Data value	Units
									1-/LPF, 10-/LPF, 100-/LPF,			
Fatty casts	M-FAT Casts	M-FAT Casts	○	○	○	○			"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
RBC casts	M-RBC Casts	M-RBC Casts	○	○	○	○			"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
WBC casts	M-WBC Casts	M-WBC Casts	○	○	○	○			"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF,		-, 1+, 2+, 3+, 4+,	

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
							Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
									<1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,			
Mucus	M-Mucus	M-Mucus	○	○	○	○			“WF” 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, “LPF” 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
Bacteria	M-Bacteria	M-Bacteria	○	○	○	○					-, +-, 1+, 2+, 3+,	
Bacteria- Cocci	M-COCCI	M-COCCI	○	○	○	○					-, +-, 1+, 2+, 3+,	
Bacteria- Rods	M-RODS	M-RODS	○	○	○	○					-, +-, 1+, 2+, 3+,	
Fungi	M-Fungi	M-Fungi	○	○	○	○					-, +-, 1+, 2+, 3+,	

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
							Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
Yeast	M-Yeast	M-Yeast	○	○	○	○					-, +-, 1+, 2+, 3+,	
Trichomonas	M-Trichomonas	M-Trichomonas	○	○	○	○					-, +-, 1+, 2+, 3+,	
Urate	M-Urate	M-Urate	○	○	○	○					-, +-, 1+, 2+, 3+,	
Phosphate	M-Phosphate	M-Phosphate	○	○	○	○					-, +-, 1+, 2+, 3+,	
Calcium oxalate crystals	M-CaOxmX”TAL”	M-CaOxmX”TAL”	○	○	○	○					-, +-, 1+, 2+, 3+,	
Uric acid crystals	M-UAX”TAL”	M-UAX”TAL”	○	○	○	○					-, +-, 1+, 2+, 3+,	
Calcium phosphate crystals	M-CaPhX”TAL”	M-CaPhX”TAL”	○	○	○	○					-, +-, 1+, 2+, 3+,	

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
			Japan	North America	China	Other	Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value	Units	Data value	Units	Data value	Units
Ammonium magnesium phosphate crystals	M-Ammoni. MAG.	M-Ammoni. MAG.	○	○	○	○					-, +-, 1+, 2+, 3+,	
Ammonium biurate crystals	M-Ammoni. Biu.	M-Ammoni. Biu.	○	○	○	○					-, +-, 1+, 2+, 3+,	
Calcium carbonate crystals	M-Calc. carbon.	M-Calc. carbon.	○	○	○	○					-, +-, 1+, 2+, 3+,	
Bilirubin crystals	M-Bilirubin	M-Bilirubin	○	○	○	○					-, +-, 1+, 2+, 3+,	
Cystine crystals	M-Cystine	M-Cystine	○	○	○	○					-, +-, 1+, 2+, 3+,	
Spermatozoa	M-Sperma	M-Sperma	○	○	○	○					-, +,	
RBC clumps	M-RBC Clumps	M-RBC Clumps	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
			Japan	North America	China	Other	Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value	Units	Data value	Units	Data value	Units
Dysmorphic RBC	M-Dys RBC	M-Dys RBC	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Acanthocytes	M-Acanthocytes	M-Acanthocytes	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
WBC-Mononuclear	M-MN	M-MN	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
WBC-Polymorphonuclear	M-PMN	M-PMN	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Neutrophils	M-NEUT	M-NEUT	○	○	○	○			“HPF” <1/HPF,			

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
			Japan	North America	China	Other	Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value	Units	Data value	Units	Data value	Units
									1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Lymphocytes	M-LYMPH	M-LYMPH	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Eosinophils	M-EO	M-EO	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Monocytes	M-MONO	M-MONO	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Macrophages	M-Macrophages	M-Macrophages	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF,			

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
			Japan	North America	China	Other	Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value	Units	Data value	Units	Data value	Units
									10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Endometrial stromal cells	M-Endometrial	M-Endometrial	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Mesothelial cells	M-Mesothelial	M-Mesothelial	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Superficial Squamous epithelial cells	M-s-Squa. EC	M-s-Squa. EC	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Intermediate/Deep Squamous epithelial cells	M-i/d-Squa. EC	M-i/d-Squa. EC	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF,			

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
							Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
									30-49/HPF, 50-99/HPF, 100-/HPF,			
Non-Squamous epithelial Cells	M-Non-Squam. EC	M-Non-Squam. EC	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Superficial Transitional (Urothelial) epithelial cells	M-s-Tran. EC	M-s-Tran. EC	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Intermediate/Deep Transitional (Urothelial) epithelial cells	M-i/d-Tran. EC	M-i/d-Tran. EC	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Epithelial cells clumps	M-EC clumps	M-EC clumps	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF,			

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
							Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
									100-/HPF,			
Intracytoplasmic inclusion-bearing cells	M-IB	M-IB	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Intranuclear inclusion bearing cells	M-Intranculear	M-Intrancule ar	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Human papilloma virus-infected cells	M-H. papilloma	M-H. papilloma	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Human polyoma virus-infected cells	M-H. polyoma	M-H. polyoma	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
			Japan	North America	China	Other	Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value	Units	Data value	Units	Data value	Units
Carcinoma	M-Carcinoma	M-Carcinoma	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Malignant lymphoma	M-ML	M-ML	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Leukemia	M-Leukemia	M-Leukemia	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Casts	M-Casts	M-Casts	○	○	○	○			“WF” 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, “LPF” 0/LPF, <1/LPF, 1-/LPF,		-, 1+, 2+, 3+, 4+,	

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
			Japan	North America	China	Other	Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value	Units	Data value	Units	Data value	Units
									10-/LPF, 100-/LPF,			
Non-hyaline casts	M-N-hyal. Casts	M-N-hyal. Casts	○	○	○	○			“WF” 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, “LPF” 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
Vacuolar-denatured casts	M-VD Cast	M-VD Cast	○	○	○	○			“WF” 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, “LPF” 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
Salt/crystal casts	M-Salt/Crystal	M-Salt/Crystal	○	○	○	○			“WF” 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, “LPF” 0/LPF, <1/LPF,		-, 1+, 2+, 3+, 4+,	

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
			Japan	North America	China	Other	Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value	Units	Data value	Units	Data value	Units
									1-/LPF, 10-/LPF, 100-/LPF,			
Macrophage casts	M-Mφ Cast	M-Mφ Cast	○	○	○	○			"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
Hemosiderin casts	M-Hemo Cast	M-Hemo Cast	○	○	○	○			"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
Myoglobin casts	M-Myrogl Cast	M-Myrogl Cast	○	○	○	○			"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF,		-, 1+, 2+, 3+, 4+,	

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
			Japan	North America	China	Other	Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value	Units	Data value	Units	Data value	Units
									<1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,			
Bence Jones protein casts	M-B-J Cast	M-B-J Cast	○	○	○	○			"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
Fibrin casts	M-Fibrin Casts	M-Fibrin Casts	○	○	○	○			"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
Broad casts	M-Broad Casts	M-Broad Casts	○	○	○	○			"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF"		-, 1+, 2+, 3+, 4+,	

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
							Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
									0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,			
Bacteria and yeast-containing casts	M-Bact Casts	M-Bact Casts	○	○	○	○			“WF” 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, “LPF” 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
Bilirubin casts	M-BIL Cast	M-BIL Cast	○	○	○	○			“WF” 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, “LPF” 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
Gram positive bacteria	M-Gram.Pos Bact	M-Gram.Pos Bact	○	○	○	○					-, +-, 1+, 2+, 3+,	

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
			Japan	North America	China	Other	Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value	Units	Data value	Units	Data value	Units
Gram negative bacteria	M-Gram.Neg Bact	M-Gram.Neg Bact	○	○	○	○					-, +-, 1+, 2+, 3+,	
Deformed bacteria	M-Deform Bact	M-Deform Bact	○	○	○	○					-, +-, 1+, 2+, 3+,	
Filamentous fungus	M-Filamentous	M-Filamentous	○	○	○	○					-, +-, 1+, 2+, 3+,	
Parasites	M-Parasites	M-Parasites	○	○	○	○					-, +-, 1+, 2+, 3+,	
Protozoa	M-Protozoa	M-Protozoa	○	○	○	○					-, +-, 1+, 2+, 3+,	
Helminths	M-Helminths	M-Helminths	○	○	○	○					-, +-, 1+, 2+, 3+,	
Amorphous salts	M-Amorph.	M-Amorph.	○	○	○	○					-, +-, 1+, 2+, 3+,	
Crystals	M-Crystals	M-Crystals	○	○	○	○					-, +-, 1+,	

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
			Japan	North America	China	Other	Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value	Units	Data value	Units	Data value	Units
											2+, 3+,	
Cholesterol crystals	M-Colesterol	M-Colesterol	○	○	○	○					-, +-, 1+, 2+, 3+,	
2,8-dihydroxyadenine crystals	M-2-8-dihydro.	M-2-8-dihydro.	○	○	○	○					-, +-, 1+, 2+, 3+,	
Tyrosine crystals	M-Tyrosine	M-Tyrosine	○	○	○	○					-, +-, 1+, 2+, 3+,	
Leucine crystals	M-Leucine	M-Leucine	○	○	○	○					-, +-, 1+, 2+, 3+,	
Drug substance crystals	M-Drug	M-Drug	○	○	○	○					-, +-, 1+, 2+, 3+,	
Hemosiderin granules	M-Hemosiderin	M-Hemosiderin	○	○	○	○					-, +,	
Semen components (Amyloid body)	M-Amyloid body	M-Amyloid body	○	○	○	○					-, +,	
Fat droplets	M-fat droplets	M-fat droplets	○	○	○	○					-, +,	

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
			Japan	North America	China	Other	Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value	Units	Data value	Units	Data value	Units
Impure ingredient (Artifacts)	M-Artifacts	M-Artifacts	○	○	○	○					-, +,	

<Notes>

*1: According to your laboratory operational procedures, result values (refer to ASTM field 9.4) may be changed and output for both of RAW data and Main Format.

* Request only necessary analysis parameters for your laboratory operational procedures.

* Even if a visual examination order is not received (or if an analysis parameter is not requested although the order is received), the order is registered using U-WAM and the result is sent.

B.4 Particle Classification (Profile: Particle Classification)

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data*1					
							Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
Red blood cells	P-RBCs	P-RBCs	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Isomorphic RBC	P-Iso RBCs	P-Iso RBCs	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
White blood cells	P-WBCs	P-WBCs	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
White blood cell clumps	P-WBC Clumps	P-WBC Clumps	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF,			

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
							Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
									100-/HPF,			
Epithelial cells	P-EC	P-EC	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Squamous cells	P-Squa.EC	P-Squa.EC	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Transitional (Urothelial) epithelial cells	P-Tran. EC	P-Tran. EC	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Rental tubular epithelial cells	P-RTEC	P-RTEC	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			

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							Data value	Units	Data value	Units	Data value	Units
Columnar epithelial cells	P-Columnar EC	P-Columnar EC	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Oval fat bodies	P-OFB	P-OFB	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Atypical cells	P-Atyp. C	P-Atyp. C	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Hyaline casts	P-Hy. Casts	P-Hy. Casts	○	○	○	○	0 to 99999999999.9 *1	/μl	"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF, 1-/LPF,		-, 1+, 2+, 3+, 4+,	

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							Data value	Units	Data value	Units	Data value	Units
									10-/LPF, 100-/LPF,			
Epithelial casts	P-Epith. casts	P-Epith. casts	○	○	○	○	0 to 99999999999.9 *1	/μl	"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
Granular casts	P-Gra. Casts	P-Gra. Casts	○	○	○	○	0 to 99999999999.9 *1	/μl	"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
Waxy casts	P-WAXy Casts	P-WAXy Casts	○	○	○	○	0 to 99999999999.9 *1	/μl	"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF,		-, 1+, 2+, 3+, 4+,	

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			Japan	North America	China	Other	Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value	Units	Data value	Units	Data value	Units
									1-/LPF, 10-/LPF, 100-/LPF,			
Fatty casts	P-FAT Casts	P-FAT Casts	○	○	○	○	0 to 99999999999.9 *1	/µl	"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
RBC casts	P-RBC Casts	P-RBC Casts	○	○	○	○	0 to 99999999999.9 *1	/µl	"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
WBC casts	P-WBC Casts	P-WBC Casts	○	○	○	○	0 to 99999999999.9 *1	/µl	"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF,		-, 1+, 2+, 3+, 4+,	

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							Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
									<1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,			
Mucus	P-Mucus	P-Mucus	○	○	○	○	0 to 99999999999.9 *1	/μl	"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
Bacteria	P-Bacteria	P-Bacteria	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +-, 1+, 2+, 3+,	
Bacteria- Cocci	P-COCCI	P-COCCI	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +-, 1+, 2+, 3+,	
Bacteria- Rods	P-RODS	P-RODS	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +-, 1+, 2+, 3+,	
Fungi	P-Fungi	P-Fungi	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +-, 1+, 2+, 3+,	

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							Data value	Units	Data value	Units	Data value	Units
Yeast	P-Yeast	P-Yeast	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +-, 1+, 2+, 3+,	
Trichomonas	P-Trichomonas	P-Trichomonas	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +-, 1+, 2+, 3+,	
Urate	P-Urate	P-Urate	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +-, 1+, 2+, 3+,	
Phosphate	P-Phosphate	P-Phosphate	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +-, 1+, 2+, 3+,	
Calcium oxalate crystals	P-CaOxm X”TAL”	P-CaOxm X”TAL”	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +-, 1+, 2+, 3+,	
Uric acid crystals	P-UA X”TAL”	P-UA X”TAL”	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +-, 1+, 2+, 3+,	
Calcium phosphate crystals	P-CaPh X”TAL”	P-CaPh X”TAL”	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +-, 1+, 2+, 3+,	

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							Data value	Units	Data value	Units	Data value	Units
Ammonium magnesium phosphate crystals	P-Ammoni. MAG.	P-Ammoni. MAG.	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +-, 1+, 2+, 3+,	
Ammonium biurate crystals	P-Ammoni. Biu.	P-Ammoni. Biu.	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +-, 1+, 2+, 3+,	
Calcium carbonate crystals	P-Calc. carbon.	P-Calc. carbon.	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +-, 1+, 2+, 3+,	
Bilirubin crystals	P-Bilirubin	P-Bilirubin	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +-, 1+, 2+, 3+,	
Cystine crystals	P-Cystine	P-Cystine	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +-, 1+, 2+, 3+,	
Sperm	P-Sperma	P-Sperma	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +,	
RBC clumps	P-RBC Clumps	P-RBC Clumps	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			

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							Data value	Units	Data value	Units	Data value	Units
Dysmorphic RBC	P-Dys RBC	P-Dys RBC	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Acanthocytes	P-Acanthocytes	P-Acanthocytes	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
WBC-Mononuclear	P-MN	P-MN	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
WBC-Polymorphonuclear	P-PMN	P-PMN	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Neutrophils	P-NEUT	P-NEUT	○	○	○	○	0 to 99999999999.9	/μl	"HPF" <1/HPF,			

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			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
							*1		1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Lymphocytes	P-LYMPH	P-LYMPH	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Eosinophils	P-EO	P-EO	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Monocytes	P-MONO	P-MONO	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Macrophages	P-Macrophages	P-Macrophages	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF,			

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			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
									10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Endometrial stromal cells	P-Endometrial	P-Endometrial	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Mesothelial cells	P-Mesothelial	P-Mesothelial	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Superficial Squamous epithelial cells	P-s-Squa. EC	P-s-Squa. EC	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Intermediate/Deep Squamous epithelial cells	P-i/d-Squa. EC	P-i/d-Squa. EC	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF,			

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							Data value	Units	Data value	Units	Data value	Units
									30-49/HPF, 50-99/HPF, 100-/HPF,			
Non-Squamous epithelial Cells	P-Non-Squam. EC	P-Non-Squam. EC	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Superficial Transitional (Urothelial) epithelial cells	P-s-Tran. EC	P-s-Tran. EC	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Intermediate/Deep Transitional (Urothelial) epithelial cells	P-i/d-Tran. EC	P-i/d-Tran. EC	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Epithelial cells clumps	P-EC clumps	P-EC clumps	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF,			

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							Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
									100-/HPF,			
Intracytoplasmic inclusion-bearing cells	P-IB	P-IB	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Intranuclear inclusion bearing cells	P-Intranculear	P-Intrancule ar	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Human papilloma virus-infected cells	P-H. papilloma	P-H. papilloma	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Human polyoma virus-infected cells	P-H. polyoma	P-H. polyoma	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			

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							Data value	Units	Data value	Units	Data value	Units
Carcinoma	P-Carcinoma	P-Carcinoma	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Malignant lymphoma	P-ML	P-ML	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Leukemia	P-Leukemia	P-Leukemia	○	○	○	○	0 to 99999999999.9 *1	/μl	"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Casts	P-Casts	P-Casts	○	○	○	○	0 to 99999999999.9 *1	/μl	"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF, 1-/LPF,		-, 1+, 2+, 3+, 4+,	

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							Data value	Units	Data value	Units	Data value	Units
									10-/LPF, 100-/LPF,			
Pathological casts	P-N-hyal. Casts	P-N-hyal. Casts	○	○	○	○	0 to 99999999999.9 *1	/μl	"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
Vacuolar-denatured casts	P-VD Cast	P-VD Cast	○	○	○	○	0 to 99999999999.9 *1	/μl	"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
Salt/crystal casts	P-Salt/Crystal	P-Salt/Crystal	○	○	○	○	0 to 99999999999.9 *1	/μl	"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF,		-, 1+, 2+, 3+, 4+,	

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			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
									1-/LPF, 10-/LPF, 100-/LPF,			
Macrophage casts	P-Mφ Cast	P-Mφ Cast	○	○	○	○	0 to 99999999999.9 *1	/μl	"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
Hemosiderin casts	P-Hemo Cast	P-Hemo Cast	○	○	○	○	0 to 99999999999.9 *1	/μl	"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
Myoglobin casts	P-Myrogl Cast	P-Myrogl Cast	○	○	○	○	0 to 99999999999.9 *1	/μl	"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF,		-, 1+, 2+, 3+, 4+,	

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			Japan	North America	China	Other	Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value	Units	Data value	Units	Data value	Units
									<1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,			
Bence Jones protein casts	P-B-J Cast	P-B-J Cast	○	○	○	○	0 to 99999999999.9 *1	/μl	"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
Fibrin casts	P-Fibrin Casts	P-Fibrin Casts	○	○	○	○	0 to 99999999999.9 *1	/μl	"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
Broad casts	P-Broad Casts	P-Broad Casts	○	○	○	○	0 to 99999999999.9 *1	/μl	"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF"		-, 1+, 2+, 3+, 4+,	

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							Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
									0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,			
Bacteria and yeast-containing casts	P-Bact Casts	P-Bact Casts	○	○	○	○	0 to 99999999999.9 *1	/μl	"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
Bilirubin casts	P-BIL Cast	P-BIL Cast	○	○	○	○	0 to 99999999999.9 *1	/μl	"WF" 0/WF, 1-/WF, 100-/WF, 1000-/WF, 10000-/WF, "LPF" 0/LPF, <1/LPF, 1-/LPF, 10-/LPF, 100-/LPF,		-, 1+, 2+, 3+, 4+,	
Gram positive bacteria	P-Gram.Pos Bact	P-Gram.Pos Bact	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +-, 1+, 2+, 3+,	

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
							Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
Gram negative bacteria	P-Gram.Neg Bact	P-Gram.Neg Bact	○	○	○	○	0 to 99999999999.9 *1	/µl			-, +-, 1+, 2+, 3+,	
Deformed bacteria	P-Deform Bact	P-Deform Bact	○	○	○	○	0 to 99999999999.9 *1	/µl			-, +-, 1+, 2+, 3+,	
Filamentous fungus	P-Filamentous	P-Filamentous	○	○	○	○	0 to 99999999999.9 *1	/µl			-, +-, 1+, 2+, 3+,	
Parasites	P-Parasites	P-Parasites	○	○	○	○	0 to 99999999999.9 *1	/µl			-, +-, 1+, 2+, 3+,	
Protozoa	P-Protozoa	P-Protozoa	○	○	○	○	0 to 99999999999.9 *1	/µl			-, +-, 1+, 2+, 3+,	
Helminths	P-Helminths	P-Helminths	○	○	○	○	0 to 99999999999.9 *1	/µl			-, +-, 1+, 2+, 3+,	
Amorphous salts	P-Amorph.	P-Amorph.	○	○	○	○	0 to 99999999999.9 *1	/µl			-, +-, 1+, 2+, 3+,	
Crystal	P-Crystals	P-Crystals	○	○	○	○	0 to 99999999999.9 *1	/µl			-, +-, 1+,	

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
							Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
											2+, 3+,	
Cholesterol crystals	P-Colesterol	P-Colesterol	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +-, 1+, 2+, 3+,	
2,8-dihydroxyadenine crystals	P-2-8-dihydro.	P-2-8-dihydro.	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +-, 1+, 2+, 3+,	
Tyrosine crystals	P-Tyrosine	P-Tyrosine	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +-, 1+, 2+, 3+,	
Leucine crystals	P-Leucine	P-Leucine	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +-, 1+, 2+, 3+,	
Drug substance crystals	P-Drug	P-Drug	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +-, 1+, 2+, 3+,	
Hemosiderin granules	P-Hemosiderin	P-Hemosiderin	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +,	
Semen components (Amyloid body)	P-Amyloid body	P-Amyloid body	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +,	
Fat droplets	P-fat droplets	P-fat droplets	○	○	○	○	0 to 99999999999.9 *1	/μl			-, +,	

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
			Japan	North America	China	Other	Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value	Units	Data value	Units	Data value	Units
Impure ingredient (Artifacts)	P-Artifacts	P-Artifacts	○	○	○	○	0 to 99999999999.9 *1	/µl			-, +,	

<Notes>

*1: 12 significant figures and 1 decimal place

* According to your laboratory operational procedures, result values (refer to ASTM field 9.4) may be changed and output for both of RAW data and Main Format.

* Request only necessary analysis parameters for your laboratory operational procedures.

* Even if a particle classification order is not received (or if an analysis parameter is not requested although the order is received), the order is registered using U-WAM and the result is sent.

* For particle classification, when the result type of RAW data is Qualitative, Main Format of the result format can be changed. Units that can be used in the result format vary by parameters. (For the available units, refer to “Appendix H. Units”.)

B.5 Body Fluid (Profile: BF)

<UF-3000 Reportable Parameters>

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data					
			Japan	North America	China	Other	Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value	Units	Data value	Units	Data value	Units
Red blood cells	RBC-BF	RBC-BF	○	○		○	0.0 to 99999.9	/μL				
White blood cells	WBC-BF	WBC-BF	○	○		○	0.0 to 99999.9	/μL				
Nucleated cell count	TNC	TNC		○		○	0.0 to 99999.9	/μL				

<UF-3000 Research Parameters>

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data					
			Japan	North America	China	Other	Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value	Units	Data value	Units	Data value	Units
Nucleated cell count	~TNC	*1	○ *2				0.0 to 99999.9	/μL				
SF Total Count	~SF_TC-BF	*1	○ *2	○ *2		○ *2	0 to 999999	count				
CW Total Count	~CW_TC-BF	*1	○ *2	○ *2		○ *2	0 to 999999	count				
CB Total Count	~CB_TC-BF	*1	○ *2	○ *2		○ *2	0 to 999999	count				

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data					
							Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
SF Others	~SF_OTHERS-BF	*1	○ *2	○ *2		○ *2	0.0 to 99999.9	/uL				
CW Others	~CW_OTHERS-BF	*1	○ *2	○ *2		○ *2	0.0 to 99999.9	/uL				
DEBRIS	~DEBRIS-BF	*1	○ *2	○ *2		○ *2	0.0 to 99999.9	/uL				

<UF-4000/5000 Reportable Parameters>

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data					
							Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
Red blood cells	RBC-BF	RBC-BF	○	○		○	0.0 to 99999.9	/μL				
White blood cells	WBC-BF	WBC-BF	○	○		○	0.0 to 99999.9	/μL				
Mononucleosis (count)	MN#	MN#	○	○		○	0.0 to 99999.9	/μL				
Mononucleosis (percentage)	MN%	MN%	○	○		○	0.0 to 100.0	%				
Polymorphonuclear leukocytes (count)	PMN#	PMN#	○	○		○	0.0 to 99999.9	/μL				
Polymorphonuclear leukocytes	PMN%	PMN%	○	○		○	0.0 to 100.0	%				
Epithelial cells	EC-BF	EC-BF		○		○	0.0 to 99999.9	/μL				
Nucleated cell count	TNC	TNC		○		○	0.0 to 99999.9	/μL				
Bacteria	BACT-BF	BACT-BF		○		○	0.0 to 99999.9	/μL				

<UF-4000/5000 Research Parameters>

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data					
							Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
Epithelial cells	~EC-BF	*1	○ *2	○ *2			0.0 to 99999.9	/uL				
Nucleated cell count	~TNC	*1	○ *2				0.0 to 99999.9	/μL				
Bacteria	~BACT-BF	*1	○ *2	○ *2			0.0 to 99999.9	/uL				
SF Total Count	~SF_TC-BF	*1	○ *2	○ *2		○ *2	0 to 999999	count				
CW Total Count	~CW_TC-BF	*1	○ *2	○ *2		○ *2	0 to 999999	count				
CB Total Count	~CB_TC-BF	*1	○ *2	○ *2		○ *2	0 to 999999	count				
SF Others	~SF_OTHERS-BF	*1	○ *2	○ *2		○ *2	0.0 to 99999.9	/uL				
CW Others	~CW_OTHERS-BF	*1	○ *2	○ *2		○ *2	0.0 to 99999.9	/uL				
DEBRIS	~DEBRIS-BF	*1	○ *2	○ *2		○ *2	0.0 to 99999.9	/uL				

<Notes>

*1: Research parameter orders cannot be registered to U-WAM from the host computer.

*2: Research parameters may not be output depending on the setting of U-WAM.

* For body fluid, when the result type of RAW data is Qualitative, Main Format of the result format can be changed.
Units that can be used in the result format vary by parameters. (For the available units, refer to “Appendix H. Units”.)

B.6 Body Fluid Visual Examination (Profile: Visual body fluid)

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
							Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
RBCs	M-RBCs-BF	M-RBCs-BF	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
WBCs	M-WBCs-BF	M-WBCs-BF	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
WBC-Mononuclear	M-WBC-Mono-BF	M-WBC-Mono-BF	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
WBC-Polymorphonuclear	M-WBC-Polymorp-BF	M-WBC-Polymorp-BF	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
							Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
WBC Clumps	M-WBC Clumps-BF	M-WBC Clumps-BF	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Macrophages (Histiocytes)	M-Macrophages-BF	M-Macrophages-BF	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
EC	M-EC-BF	M-EC-BF	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Mesothelial cells	M-Mesothelial-BF	M-Mesothelial-BF	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
TNC (Total nucleated cells)	M-TNC-BF	M-TNC-BF	○	○	○	○			"HPF" <1/HPF,			

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
							Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
									1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Atypical cells	M-Atyp. C-BF	M-Atyp. C-BF	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Bacteria	M-Bacteria-BF	M-Bacteria-BF	○	○	○	○					-, +-, 1+, 2+, 3+,	
Yeast	M-Yeast-BF	M-Yeast-BF	○	○	○	○					-, +-, 1+, 2+, 3+,	
Filamentous fungus	M-Parasites-BF	M-Parasites-BF	○	○	○	○					-, +-, 1+, 2+, 3+,	
Amorphous salts	M-AMO-BF	M-AMO-BF	○	○	○	○					-, +-, 1+, 2+, 3+,	

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data*1					
			Japan	North America	China	Other	Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value	Units	Data value	Units	Data value	Units
Crystals	M-UA X”TAL-BF	M-UA X”TAL-BF	○	○	○	○					-, +-, 1+, 2+, 3+,	
Neutrophils	M-NEUT-BF	M-NEUT-BF	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Lymphocytes	M-LYMPH-BF	M-LYMPH-BF	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Eosinophils	M-EO-BF	M-EO-BF	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Monocytes	M-MONO-BF	M-MONO-BF	○	○	○	○			“HPF” <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF,			

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data[*1]					
							Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Japan	North America	China	Other	Data value	Units	Data value	Units	Data value	Units
									30-49/HPF, 50-99/HPF, 100-/HPF,			
Basophils	M-BASO-BF	M-BASO-BF	○	○	○	○			"HPF" <1/HPF, 1-4/HPF, 5-9/HPF, 10-19/HPF, 20-29/HPF, 30-49/HPF, 50-99/HPF, 100-/HPF,			
Bacteria- Cocci	M-COCCI-BF	M-COCCI-BF	○	○	○	○					-, +-, 1+, 2+, 3+,	
Bacteria- Rods	M-RODS-BF	M-RODS-BF	○	○	○	○					-, +-, 1+, 2+, 3+,	
Fungi	M-Fungi-BF	M-Fungi-BF	○	○	○	○					-, +-, 1+, 2+, 3+,	
Monosodium urate	M-Monosodium-BF	M-Monosodium-BF	○	○	○	○					-, +-, 1+, 2+, 3+,	
Calcium pyrophosphate dehydrate	M-Calcium pyr..-BF	M-Calcium pyr..-BF	○	○	○	○					-, +-, 1+, 2+, 3+,	

Full name	Name for host transmission (default)	Parameter ID	Country/region				Result value information of RAW data*1					
			Japan	North America	China	Other	Result value type (quantitative)		Result value type (semi-quantitative)		Result value type (qualitative)	
							Data value	Units	Data value	Units	Data value	Units
Cholesterol crystals	M-Cholesterol-BF	M-Cholesterol-BF	○	○	○	○					-, +-, 1+, 2+, 3+,	

<Notes>

*1: According to your laboratory operational procedures, result values (refer to ASTM field 9.4) may be changed and output for both of RAW data and Main Format.

* Request only necessary analysis parameters for your laboratory operational procedures.

* Even if a visual body fluid examination order is not received (or if an analysis parameter is not requested although the order is received), the order is registered using U-WAM and the result is sent.

B.7 QC Parameters

QC parameters that are output in QC analysis results.

<UC-Control>

QC material used with the urine chemistry analyzer. Regardless of the material level (Low, High), the same parameters are output.

(The same QC parameters are output regardless of country/region and the type of analyzer connected to U-WAM.)

[Urine chemistry analyzer]

Full name	Name for host transmission (default)	Parameter ID	Result value information of RAW data					
			Result value type (reflectance)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Data value	Units	Data value	Units	Data value	Units
Urobilinogen	URO	URO	0.0 to 999.9	%	"Customary units" normal, 2.0, 4.0, 8.0, 12.0 "SI units" normal, 34.0, 68.0, 135.0, 202.0	"Customary units" mg/dL "SI units" µmol/L	normal,1+,2+,3+,4+	
Occult Blood (hemoglobin)	BLD	BLD	0.0 to 999.9	%	"Customary units, SI units" 0.03, 0.06, 0.15, 0.75	"Customary units, SI units" mg/dL	-, +-, 1+, 2+, 3+	
Bilirubin	BIL	BIL	0.0 to 999.9	%	"Customary units" 0.5, 1.0, 2.0 "SI units" 8.6, 17.0, 34.0	"Customary units" mg/dL "SI units" µmol/L	-, 1+, 2+, 3+	

Full name	Name for host transmission (default)	Parameter ID	Result value information of RAW data					
			Result value type (reflectance)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Data value	Units	Data value	Units	Data value	Units
Ketone body	KET	KET	0.0 to 999.9	%	"Customary units" 10, 30, 80 "SI units" 0.93, 2.8, 7.4	"Customary units" mg/dL "SI units" mmol/L	-, 1+, 2+, 3+	
Glucose	GLU	GLU	0.0 to 999.9	%	"Customary units" 50, 100, 250, 500, 2000 "SI units" 2.8, 5.6, 14, 28, 111	"Customary units" mg/dL "SI units" mmol/L	-, +-, 1+, 2+, 3+, 4+	
Protein	PRO	PRO	0.0 to 999.9	%	"Customary units" 15, 30, 100, 300, 1000 "SI units" 0.15, 0.3, 1.0, 3.0, 10	"Customary units" mg/dL "SI units" g/L	-, +-, 1+, 2+, 3+, 4+	
pH	PH	PH	0.0 to 999.9	%			5.0 to 9.0	
Nitrite	NIT	NIT	0.0 to 999.9	%			-, +	
Leukocyte	LEU	LEU	0.0 to 999.9	%	25, 75, 500	"Customary units, SI units" c/µl	-, 1+, 2+, 3+	

Full name	Name for host transmission (default)	Parameter ID	Result value information of RAW data					
			Result value type (reflectance)		Result value type (semi-quantitative)		Result value type (qualitative)	
			Data value	Units	Data value	Units	Data value	Units
Creatinine	CRE	CRE	0.0 to 999.9	%	"Customary units" 10, 50, 100, 200, 300 "SI units" 0.1, 0.5, 1.0, 2.0, 3.0	"Customary units" mg/dL "SI units" g/L		
Albumin	ALB	ALB	0.0 to 999.9	%	"Customary units" 10, 30, 80, 150, over "SI units" 0.01, 0.03, 0.08, 0.15, over	"Customary units" mg/dL "SI units" g/L		
Specific gravity (Ref)	S.G.	S.G.					1.000 to 1.050	

<UF-CONTROL>

QC material used with the urine sediment analyzer (UF-3000/4000/5000) or the particle digital imaging device (UD-10). The parameters output vary depending on the material level (Low, High).

(The same QC parameters are output regardless of country/region and the type of analyzer connected to U-WAM.)

There is a case to be measured the quality control material of the same lot in the urine sediment analyzer (UF-3000/4000/5000) and the particle digital imaging device (UD-10).In this case, same lot number is set in Specimen ID. The determination of the measuring analyzer, judge in Universal Test ID.

[Urine sediment analyzer]

Full name		Name for host transmission (fixed)	Parameter ID	Material level		Data value	Units
				Low	High		
Analysis Parameters	Red blood cells	RBC	RBC	○	○	0.0 to 99999.9	/μL
	White blood cells	WBC	WBC	○	○	0.0 to 99999.9	/μL
	Epithelial cells	EC	EC	○	○	0.0 to 99999.9	/μL
	Casts	CAST	CAST	○	○	0.00 to 9999.99	/μL
	Bacteria	BACT	BACT	○	○	0.0 to 99999.9	/μL
	Cond.	Cond.	Cond.	○	○	0.0 to 99.9	mS/cm
Sensitivity Parameters	Mean value of forward scattered light peak of RBC analyzed on SFch	SF_FSC_P	SF_FSC_P		○	0.0 to 255.0	ch
	Mean value of forward scattered light width of RBC analyzed on SFch	SF_FSC_W	SF_FSC_W		○	0.0 to 1023.0	ch
	Mean value of fluorescence (high sensitivity) peak of RBC analyzed on SFch	SF_FLH_P	SF_FLH_P		○	0.0 to 255.0	ch
	Mean value of lateral scattered light (low sensitivity) peak of RBC analyzed on SFch	SF_SSL_P	SF_SSL_P		○	0.0 to 255.0	ch
	Mean value of depolarized lateral scattered light peak of RBC analyzed on SFch	SF_DSS_P	SF_DSS_P		○	0.0 to 255.0	ch
	Mean value of forward scattered light peak of WBC analyzed on CRch (WBC)	CW_FSC_P	CW_FSC_P		○	0.0 to 255.0	ch
	Mean value of fluorescence (high sensitivity) peak of WBC analyzed on CRch (WBC)	CW_FLH_P	CW_FLH_P		○	0.0 to 255.0	ch
	Mean value of lateral scattered light (high sensitivity) peak of WBC analyzed on CRch (WBC)	CW_SSH_P	CW_SSH_P		○	0.0 to 255.0	ch
	Mean value of lateral scattered light (low sensitivity) peak of WBC analyzed on CRch (WBC)	CW_SSL_P	CW_SSL_P		○	0.0 to 255.0	ch
	Mean value of depolarized lateral scattered light peak of WBC analyzed on CRch (WBC)	CW_DSS_P	CW_DSS_P		○	0.0 to 255.0	ch

	Mean value of forward scattered light peak of BACT analyzed on CRch (BACT)	CB_FSC_P	CB_FSC_P		○	0.0 to 255.0	ch
	Mean value of fluorescence (low sensitivity) peak of BACT analyzed on CRch (BACT)	CB_FLL_P	CB_FLL_P		○	0.0 to 255.0	ch
	Mean value of lateral scattered light peak of BACT analyzed on CRch (BACT)	CB_SSH_P	CB_SSH_P		○	0.0 to 255.0	ch

[Particle digital imaging device]

Full name	Name for host transmission (fixed)	Parameter ID	Material level		Data value	Units
			Low	High		
C1-Class2	C1-Class2	C1-Class2	○	○	0.0 to 99999.9	/uL
C1-PCD_M	C1-PCD_M	C1-PCD_M	○	○	0.0 to 99999.9	um
C1-PCN_CV	C1-PCN_CV	C1-PCN_CV	○	○	0.0 to 999.9	%
C1-FB_M	C1-FB_M	C1-FB_M	○	○	0.0 to 255.0	
C2-Class2	C2-Class2	C2-Class2	○	○	0.0 to 99999.9	/uL
C2-PCD_M	C2-PCD_M	C2-PCD_M	○	○	0.0 to 99999.9	um
C2-PCN_CV	C2-PCN_CV	C2-PCN_CV	○	○	0.0 to 999.9	%
C2-FB_M	C2-FB_M	C2-FB_M	○	○	0.0 to 255.0	

Appendix C. Research Information

Research information that U-WAM can output to the host are indicated below.

＜UF-3000/4000/5000＞

Research information name	Data value	Units	Remarks
RBC-Info.	0, 1, 2, 3	*1	0: No judgment 1: RBC : Isomorphic? 2: RBC : Dysmorphic? 3: RBC : Mixed?
UTI-Info.	0, 1	*1	0: No judgment 1: UTI : UTI?
BACT-Info.	0, 1, 2, 3, 4	*1	0: No judgment 1: BACT : Gram Negative? 2: BACT : Gram Positive? 3: BACT : Gram Pos/Neg? 4: BACT : Unclassified

*1: Units are not output.

* Research information orders cannot be registered to U-WAM from the host computer.

* Research information may not be output depending on the setting of U-WAM.

* For details on the research information, refer to “5.2.1 Urine chemistry analysis results”.

Appendix D. Review Comments

Review comments that U-WAM can output to the host are indicated below.

<UF-3000/4000/5000>

Review comment name*1*2	Display conditions
RC_USER_1	Results judged as requiring REVIEW based on the REVIEW judgment settings on the UF analyzer
RC_USER_2	Results judged as requiring REVIEW based on the REVIEW judgment settings on the UF analyzer
RC_USER_3	Results judged as requiring REVIEW based on the REVIEW judgment settings on the UF analyzer
RC_USER_4	Results judged as requiring REVIEW based on the REVIEW judgment settings on the UF analyzer
RC_USER_5	Results judged as requiring REVIEW based on the REVIEW judgment settings on the UF analyzer
RC_USER_6	Results judged as requiring REVIEW based on the REVIEW judgment settings on the UF analyzer
RC_USER_7	Results judged as requiring REVIEW based on the REVIEW judgment settings on the UF analyzer
RC_UNIVERSAL	Results judged as requiring REVIEW based on the REVIEW judgment settings on the UF analyzer
RC_DEBRIS	A high DEBRIS value occurred
RC_RBCYLC	RBC/YLC fraction error occurred Fraction is difficult due to the overlapping position of RBC and YLC particles.
RC_DC	Abnormal urine conductivity occurred Tangible components such as RBC and WBC may have broken down and were not correctly measured
RC_RBC_Carryover	Carryover from previous high-concentration RBC sample suspected
RC_WBC_Carryover	Carryover from previous high-concentration WBC sample suspected
RC_BACT_Carryover	Carryover from previous high-concentration BACT sample suspected
RC_SPERM_Carryover*3	Carryover from previous high-concentration SPERM sample suspected

*1 For details on the review comments, refer to “5.2.2 Urine sediment analysis results”.

*2 For review comment names that are output to the host computer, refer to “F.3 Review Comments (Result Type “RC”)”.

*3In case of UF-5000/4000 North America specification, RC_SPERM_Carryover is outputted and displayed.In case of UF-3000 North America specification, RC_SPERM_Carryover is not outputted and displayed.

Appendix E. Scatter Images

Scatter images that U-WAM can output to the host are indicated below. When U-WAM outputs results to the host computer, the scatter images that can be output vary by country/region and by the type of analyzer that is connected to U-WAM.

Scatter images that can be output are indicated by "○".

E.1 Urine Sediment (Profile: UF)

<UF-3000/4000/5000>

Scatter image name	Country/region			
	Japan	North America	China	Other
SF_FLH_PxSF_FSC_P				
SF_DSS_PxSF_FSC_P	○	○	○	○
CW_FLL_AxCW_FSC_W	○	○	○	○
SF_FLL_WxSF_FLL_A	○	○	○	○
CB_FLH_PxCB_FSC_P	○	○	○	○
CW_FLH_PxCW_FSC_P	○	○	○	○
CW_SSH_AxCW_FSC_W	○	○	○	○
CW_FLH_PxCW_SSH_P				
HIST_SF_FSC_P	○	○	○	○

E.2 Body Fluid (Profile: BF)

<UF-3000>

Scatter image name	Country/region			
	Japan	North America	China	Other
SF_DSS_PxSF_FSC_P-BF	○	○	○	○
CW_FLL_AxCW_FSC_W-BF	○	○	○	○
CW_SSH_PxCW_FLL_P-BF				
CB_FLH_PxCB_FSC_P-BF				
CW_SSH_AxCW_FSC_W-BF	○	○	○	○
CW_FLH_PxCW_SSH_P-BF				
HIST_SF_FSC_P-BF				

<UF-4000/5000>

Scatter image name	Country/region			
	Japan	North America	China	Other
SF_DSS_PxSF_FSC_P-BF	○	○	○	○
CW_FLL_AxCW_FSC_W-BF	○	○	○	○
CW_SSH_PxCW_FLL_P-BF	○	○	○	○
CB_FLH_PxCB_FSC_P-BF	○	○	○	○
CW_SSH_AxCW_FSC_W-BF	○	○	○	○
CW_FLH_PxCW_SSH_P-BF				
HIST_SF_FSC_P-BF				

E.3 QC Parameters

QC parameters that can be output are the same regardless of country/region and analyzer type.

Scatter image name	Output
SF_FLH_PxSF_FSC_P	
SF_DSS_PxSF_FSC_P	○
CW_FLL_AxCW_FSC_W	
SF_FLL_WxSF_FLL_A	○
CB_FLH_PxCB_FSC_P	○
CW_FLH_PxCW_FSC_P	
CW_SSH_AxCW_FSC_W	○
CW_FLH_PxCW_SSH_P	
HIST_SF_FSC_P	

Appendix F. Parameter Names for Host Transmission

The following indicates the parameter names for host transmission that are set in result messages when U-WAM outputs results to the host computer.

F.1 Reportable Parameters and Research Parameters (Result Type “S”)

The parameter names for host computer transmission set in U-WAM are set.

By default, the values in the “Name for host transmission” column defined in each table of “Appendix B. Analysis Parameters” are set as the names for host transmission.

* In QC parameters, the values in “Name for host transmission” column are fixed regardless of the settings.

F.2 Research Information (Result Type “S”)

The research information defined in “Appendix C. Research Information” can be output from U-WAM. The “Research information name” in the table in “Appendix C. Research Information”, not a user setting name, is set as the parameter name for host transmission.

F.3 Review Comments (Result Type “RC”)

The review comments defined in “Appendix D. Review Comments” can be output from U-WAM. The “Review Comment Name” in the table in “Appendix D. Review Comments”, not a user setting name, is set as the parameter name for host transmission.

F.4 Scatter Images (Result Type “IF”)

The scatter images defined in “Appendix E. Scatter Images” can be output from U-WAM. The “Scatter Image Name” in the table in “Appendix E. Scatter Images” is set as the parameter name for host transmission.

Appendix G. Shared Folder for Scatter Images

Scatter images shared with the host computer are accessed in a shared folder.

<Scatter image folder shared with host computer>

Shared folder name: “Foo”

The “(date folder)”/“(scatter image file name)” in the shared folder is set as the scatter image file path in the result message. (Refer to “9.4 Data Value” in section 4.3.3.4.)

Appendix H. Units

<For urine sediment, body fluid, and particle classification>

The units that are set when U-WAM sends Main Format results to the host computer vary by parameter and result format. Units that can be set are indicated below.

Units
mOsm/kg
%
mg/dL
count
/LPF
/ml
/HPF
/µl
ch
mS/cm
Qualitative
µmol/L
mmol/L
g/L
c/µL

Appendix I. Disease Information

Patient disease codes that can be set from the host computer are indicated below.

Only one can be set.

<Disease Codes>

Disease Code	Disease Information
KIDNEY1	Acute/chronic glomerulonephritis
KIDNEY2	Progressive glomerulonephritis
KIDNEY3	IgA nephritis
KIDNEY4	Nephrotic syndrome
KIDNEY5	Focal sclerosing glomerulonephritis
KIDNEY6	Membranous proliferative nephritis
KIDNEY7	Membranous proliferative glomerulonephritis

Disease Code	Disease Information
KIDNEY8	Acute/chronic tubulointerstitial nephritis
KIDNEY9	Purpura nephritis
KIDNEY10	Acute renal insufficiency
KIDNEY11	Chronic kidney disease
KIDNEY12	Acute/chronic renal failure
KIDNEY13	Diabetic nephropathy
KIDNEY14	Fanconi syndrome
KIDNEY15	Nephrosclerosis
KIDNEY16	Renal infarction
KIDNEY17	Kidney damage caused by desmosis
KIDNEY18	Lupus nephritis
KIDNEY19	Scleroderma kidney
KIDNEY20	Polyarteritis nodosa
KIDNEY21	Wegener granulomatosis
KIDNEY22	ANCA-associated glomerulonephritis
KIDNEY23	Goodpasture syndrome
KIDNEY24	Sjogren syndrome
KIDNEY25	Nephrogenic diabetes insipidus
KIDNEY26	Simple renal cyst
KIDNEY27	Multicystic renal cyst
KIDNEY28	Pyelolithiasis
KIDNEY29	Renal cell carcinoma
KIDNEY30	Embryonal adenosarcoma
BLADDER1	Bladder cancer
BLADDER2	Renal pelvis carcinoma
BLADDER3	Urethral cancer
BLADDER4	Prostate cancer
BLADDER5	Prostatic hypertrophy
BLADDER6	Acute urinary tract infection
BLADDER7	Chronic urinary tract infection
BLADDER8	Pyelonephritis
BLADDER9	Cystitis
BLADDER10	Prostatitis
BLADDER11	Urethritis
BLADDER12	Trichomonas vaginitis

Disease Code	Disease Information
BLADDER13	Hydronephrosis
BLADDER14	Ureteral stone
BLADDER15	Kidney transplant