FUJIFILM

FCR

NEW

Mammography QC Program

For digital mammography with superior quality and reliability

FUJIFILM FCR Mammography QC Program is a dedicated quality control (QC) program applicable to the FCR mammography system based on IEC61233-3-2 Ed. 2.0.
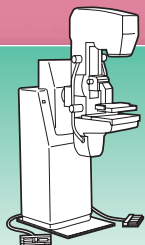
This QC program enables quantitative measurements, visual inspections and functional checks on the entire mammography system including mammography equipment, FCR reader units, IPs, cassettes and viewing boxes, through the FCR installation test, followed by daily/weekly, quarterly, semi-annual and annual tests.

This program provides the ability to detect gradual changes in the entire mammography system before potential problems occur and thus enables the system to keep a stable image quality for both screening and diagnostic mammography.

1 Shot Phantom M Plus
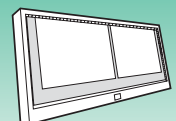
Equipment covered by this QC program

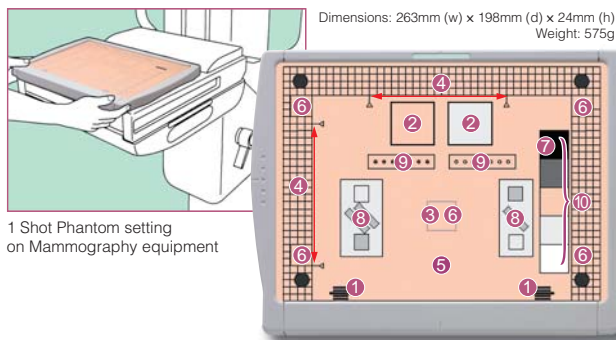| Mammography Equipment	FCR reader units	IPs and Cassettes	Viewing boxes
	(FCR PROFECT CS/One/FCR 5000MA Plus)	(HR-BD/Type DM)	

The program consists of the exclusive "FCR 1 Shot Phantom M Plus" and the "FCR Mammography QC Software/Guidebook."

1 With "FCR 1 Shot Phantom M Plus," a daily quantitative test can be performed on 10 test items with a single exposure, enabling wide-ranging analysis of the system in a relatively short time.*

*Approximately 10 minutes in the FUJIFILM laboratory, compared with 5 hours (approx.) using the procedures described in the IEC standard.

Dimensions: 263mm (w) × 198mm (d) × 24mm (h)
Weight: 575g

1 Shot Phantom setting on Mammography equipment

Test items of 1 Shot Phantom

❶ Missed tissue at chest wall side ❷ CNR ❸ System sensitivity
❹ Geometric distortion ❺ System artifact (the whole image) ❻ Uniformity
❼ Dynamic range ❽ Spatial resolution ❾ LCD ❿ Linearity/Beam quality

2 The "FCR Mammography QC Software," designed for performing periodic QC, data analysis and managing the QC test log, is installed on the CR Console that is part of the FCR mammography system.

1 Shot Phantom image on CR Console

Calculated QC result of 1 Shot Phantom

Test log data on CR Console

3 The "FCR Mammography QC Program Guidebook" provides instructions on full procedures for quality control, technical explanations and other information necessary for this QC program.

QC test items covered by FUJIFILM FCR Mammography QC program

Installation test	1. S value confirmation 2. Inter Plate (IP) variation 3. IP fog in storage area	**Quarterly test**	Repeat analysis
		Semi-annual test	1. S value confirmation 2. Compression device confirmation 3. Viewing box maintenance

Daily/Weekly test	1. Test with 1 Shot Phantom • Missed tissue at chest wall side • Contrast to noise ratio (CNR) • System sensitivity constancy • Geometric distortion • System artifact • Uniformity • Dynamic range • Spatial resolution (SR) • Low contrast detectability (LCD) • Linearity/Beam quality assessment 2. Test with ACR phantom 3. Good practice (Cleaning) • Mammography X-ray equipment • IP/Cassettes • Diagnostic monitors • Viewing boxes
Annual test	1. Image performance test • Additive lag effects (Lag) • Multiplicative lag effects (Ghosting) • Missed tissue at chest wall side (40mm in height)* • Visual and functional tests 2. Spatial resolution test (Magnification) 3. X-ray equipment performance test • kVp accuracy and reproducibility • Half value layer (HVL) • Collimation assessment • Radiation output 4. AEC system performance test • AEC density control function • AEC reproducibility • CNR exposure mode n • AGD exposure mode n

Test items evaluated by 1 Shot Phantom

To perform the entire program, other measuring equipment and jigs in addition to 1 Shot Phantom are required.

* This test is only required in limited countries/areas. Comply with local regulations/guidelines.

Applicable for : 1. FCR reader unit and IP/Cassette type
• FCR PROFECT CS/One (50μm/pixel image) IP: HR-BD, Cassette: Type DM
• FCR 5000MA Plus (50μm/pixel image) IP: HR-BD, Cassette: Type DM
2. CR Console
• CR Console Ver. 5.0 or later

Specifications and PC requirements are subject to change without notice.
All brand names or trademarks are the property of their respective owners.
Not available in the United States and Canada.