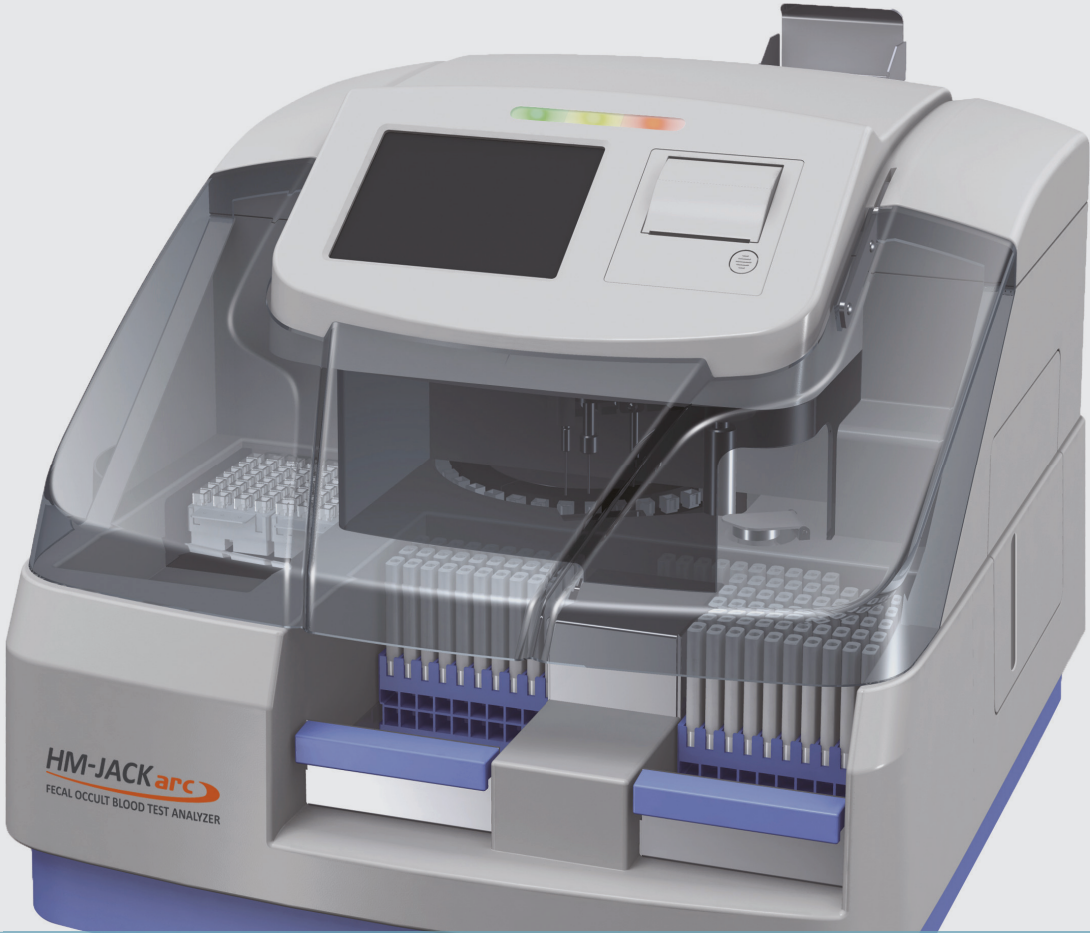


# HM-JACKarc

## Faecal Immunochemical Testing

### Operation Guide



	Page(s)		Page(s)
HM-JACKarc Procedure Summary	2	System Start-up	8
Handling of Reagents and Samples	3-4	Measurement	8-9
Registration of Latex Reagent Master Curves and Calibration Data	4-5	Shutdown Inspection	10
Adding New Buffer and Control Lot Numbers, Expiry Dates and Control Ranges	6	Shutdown Operation	10
Cell Setting Operation Procedure	6-7	Alarm Displays	11
		Barcode Read Messages	11

# HM-JACKarc Procedure Summary

## Fully Automated Quantitative FIT system

The HM-JACKarc system combines the qualities of a state-of-the-art automated analyser, a bespoke faecal sample tube and dedicated, sensitive, latex agglutination reagents.

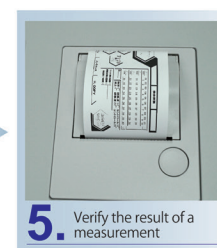
This combination provides a high throughput solution for the detection of Faecal Occult Blood.

### Key features:

- Linear Range: 7 - 400ng/mL
- Easy to use sample collection device
- Fully automated
- High speed performance: Up to 200 samples per hour



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## Latex Reagent

- Return to room temperature (15-25°C) before use, at least 20 minutes
- Gently mix by repeated inversion before setting in position on analyser
- Reset counter for new bottle (18mL = 200 tests)
- Never top-up one bottle from another
- Always calibrate when changing between lots
- Return to storage at 2-8°C immediately after use

\* When changing between lots, read the barcode from the Master Curve Card provided with the reagent.



## Buffer Reagent

- Return to room temperature (15-25°C) before use, at least 20 minutes
- This reagent may be stored on the analyser once opened (up to 14 days)
- Reset counter for new bottle (250mL = 1037 tests)
- Before a long period of inactivity, replace buffer with dH<sub>2</sub>O and perform 2-3 WASH primes
- Unopened bottles should be stored at 2-8°C for long-term storage



## Calibrator (Standards)

- Bring to room temperature (15-25°C) before use, at least 20 minutes
- Add 1.0 mL of dH<sub>2</sub>O, leave to stand for at least 30 minutes, then mix by gently rolling, making sure no bubbles remain
- This reagent is stable for one week at 2-8°C after reconstituted
- Frozen storage in 250 µL aliquots is recommended (-30°C or below, for up to one month)

\* When changing between lots, read the barcode from the Calibrator Card provided with the reagent.





### Control

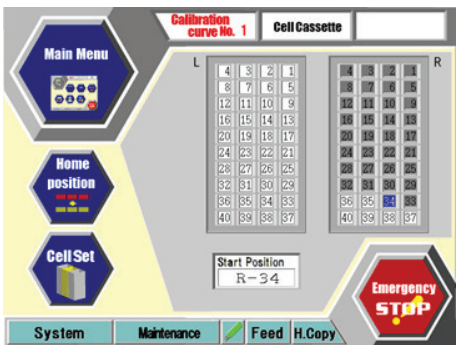
- Bring to room temperature (15-25°C) before use, at least 20 minutes
- Add 1mL of dH<sub>2</sub>O, leave to stand for at least 30 minutes, then mix by gently rolling, making sure no bubbles remain
- This reagent is stable for one week at 2-8°C after reconstituted
- Frozen storage in 200 µL aliquots is recommended (-30°C or below, for up to one month)



### Samples

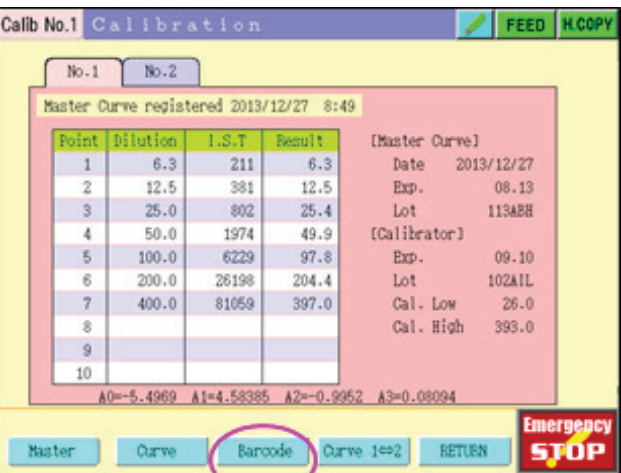
- Mix sample collection devices by repeated inversion before placing them on the HM-JACKarc

\* Read the insert documentation before handling reagents



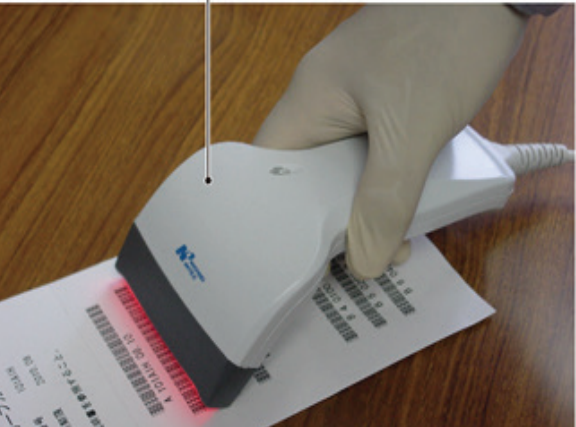
## Registration of Latex Reagent Master Curves and Calibration Data

1. Have the latex reagent **Master Curve Card** and the **Calibration Card** ready.
2. Touch **[Calibration Curve]** on the Main Menu.
3. Touch **[Barcode]** on the Standard Curve screen.

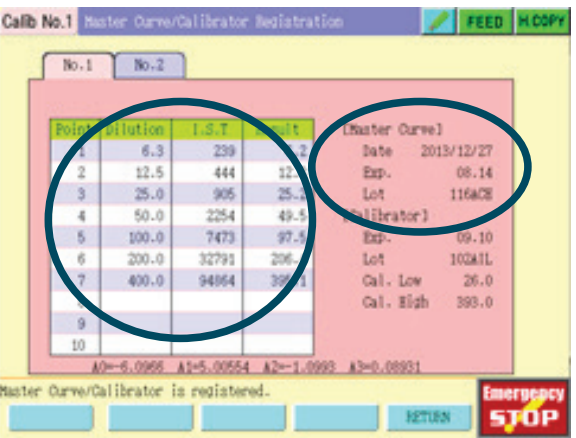


4. Use the handheld barcode reader provided to read the barcodes on the **Master Curve Card**, top to bottom.
5. Touch **[OK]** to save new Master Curve.

### Barcode reader

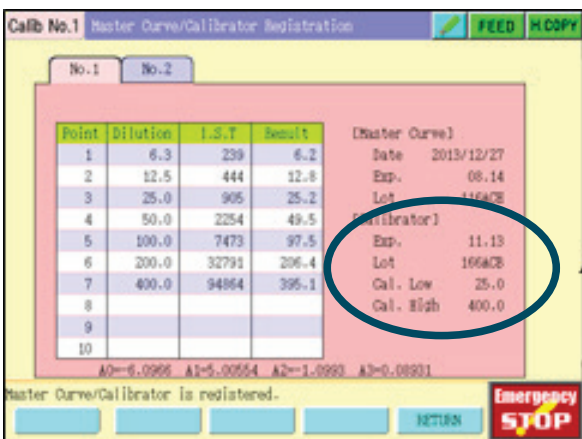


During Master Curve registration



Master Curve registration complete

6. Next, read the barcodes from the **Calibrator Card**.



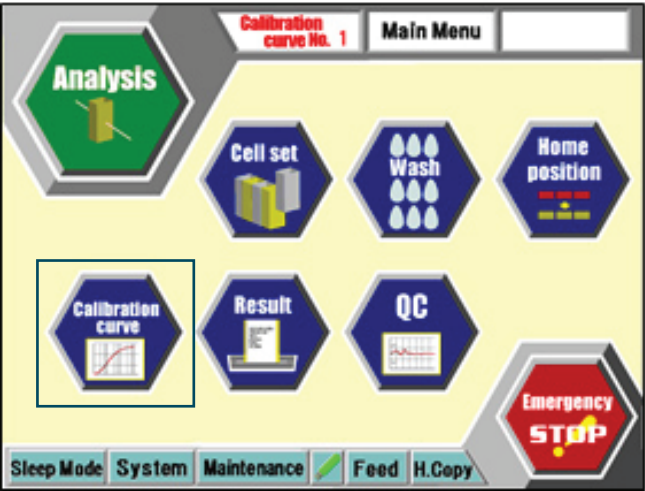
Registered here

7. Touch **[OK]** to save the new Calibration Curve.
8. Once all registrations are complete, touch **[RETURN]** to go back to the Main Menu.



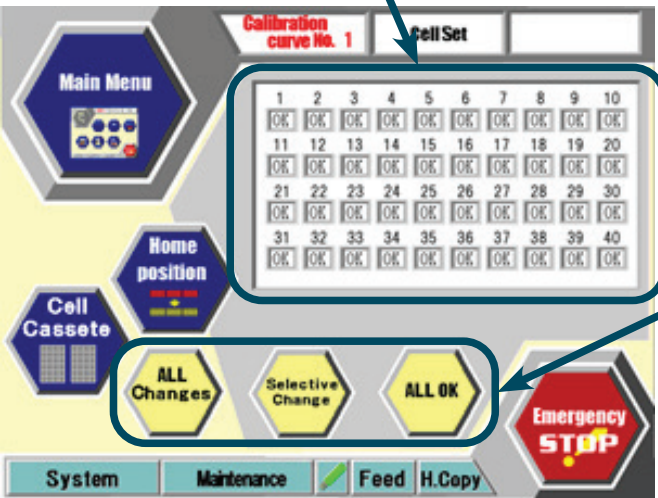
# Adding New Buffer and Control Lot Numbers, Expiry Dates and Control Ranges

- 1. From the Main Menu, touch the [Calibration Curve] icon.
- 2. Next, touch the [Master] icon, then on the next screen touch the [M/C Edit] icon.
- 3. Touch the [Buffer/Cont] icon, this screen will then allow for the Buffer and Control information to be modified.
- 4. Touch the area to modify and this will open an input screen with an alphanumeric keyboard. Only the month and year is required, e.g. (MM/YY).
- 5. Input the new lot number, control ranges and expiry dates.



2. Cells can be set on the reaction table using the [ALL Changes], [Selective Change] and [ALL OK].

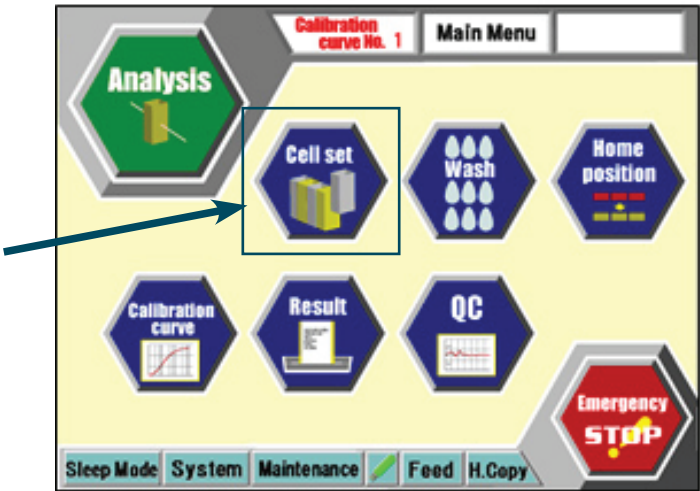
Display	Cell status
OK	Cell present (unused)
MS	Cell present (measurement in progress)
NG	Cell replacement error or aborted
? ?	Cell not checked
(Blank)	No cell present



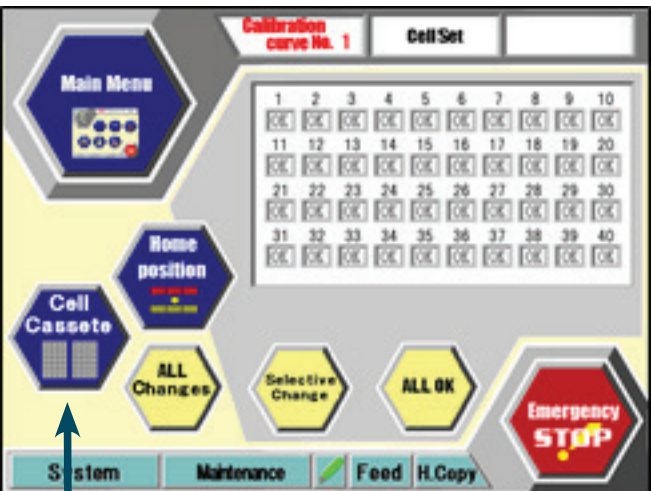
- ALL Changes** Replace all cells
- Selective Change** Only replace used cells or for positions with no cell
- ALL OK** Changes the status of all cells to the status "Cell present (unused)"

## Cell Setting Operation Procedure

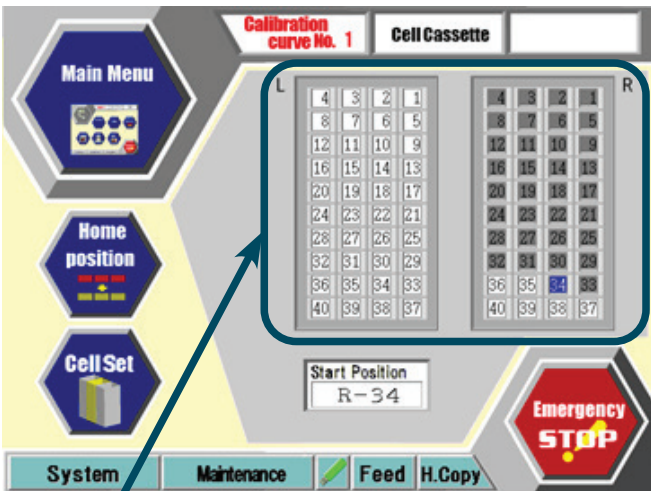
- 1. Touch [Cell Set] icon on the Main Menu.



Setting the start position for picking up the cells in the Cell Cassette



- 1. Touch [Cell Cassete].



- 2. Touch the numbers of the cells you want to remove on the diagrams of the left and right cell cassettes.
- 3. The highlighted number displayed is the "Start Position", cells are picked up starting from this position.

## System Start-up

Turn on HM-JACKarc and wait for an hour before measurement.



While waiting, perform the following:

### Consumables Check

- Check the WASH volume in the pure water tank (5mL WASH fluid : 5L dH<sub>2</sub>O)
- Check the WASTE tank level
- Check the Cell Trash box
- Check the number of cells left in the cell cassette

### Reagent Check

- Latex and Buffer must be at room temperature before measurement
- Mix Latex Reagent gently (DO NOT INVERT OR SHAKE)
- Remove the cap of Latex and set in position on the instrument
- Set Buffer in position on the instrument

### Sample Rack Trays Check

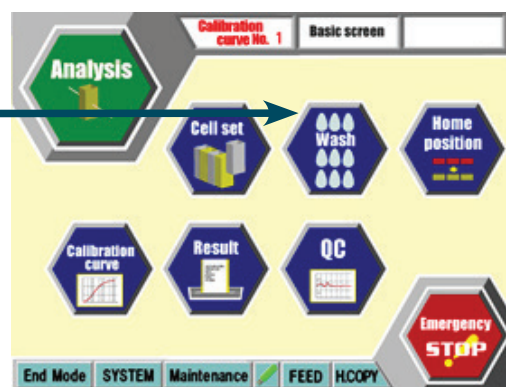
- Check both are seated correctly
- Remove all processed (analysed) racks

## Measurement

The Main Menu is displayed when the screen is touched.

1. Touch [WASH] to perform priming.

*\*Run [WASH] program 3 times if replacing from dH<sub>2</sub>O to Buffer*



Prepare Calibration [STD] and Control [CTL]

Allow each control/calibration bottle to stand at room temperature for at least 20 minutes.

Then add 1mL water and allow to stand for a further 30 minutes (do not mix immediately after addition of water)



### Dedicated STD and CTL Racks

STD

S1 S2

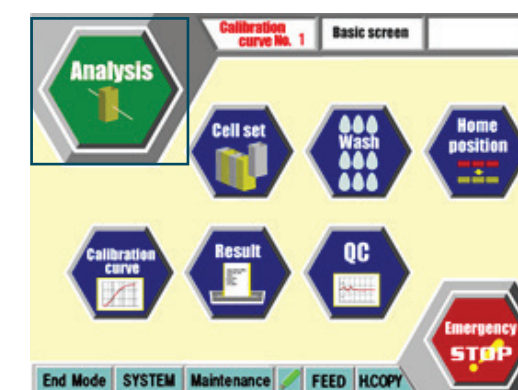
CTL

CL CH

Dispense 250µL of Calibrator and 200µL of Control into sample cups and set them in the allocated positions, as shown above.

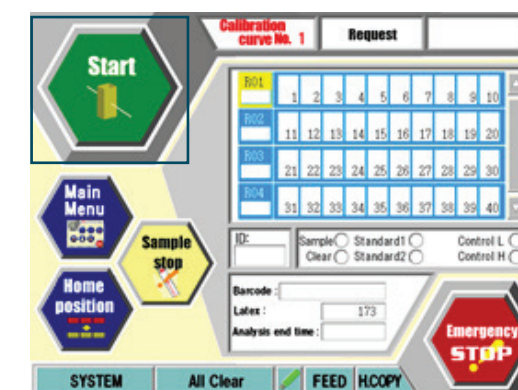
2. Run "Calibration" and "Controls"

- Set the Racks on the In Tray
- Touch [Analysis] on the Main Menu
- The Sample Order screen is displayed
- Check how many tests the latex/buffer reagent is sufficient for
- If too low, replace reagent and touch the box to input new bottle volume, to reset available tests (18mL for Latex, 250mL for Buffer)
- Touch [Start] to start analysis.



3. Analyse Samples

- Set sample collection picker on the "Sample Rack" and place on In Tray
- All barcodes should be facing front
- Touch [Start] to begin analysis





# Shutdown Inspection

## Consumables Check

- Check the remaining volume in the WASH tank (0.1% WASH Liquid) and top-up if required
- Check the volume in the WASTE tank and discard if required
- Discard waste cells from the Cell Trash Box
- Refill the cell cassette if necessary



## Reagent Check

- Store the Latex reagent at 2~8°C immediately
- Keep Buffer on board if there will be no extended period of inactivity, otherwise store at 2-8°C

## Sample Rack Trays Check

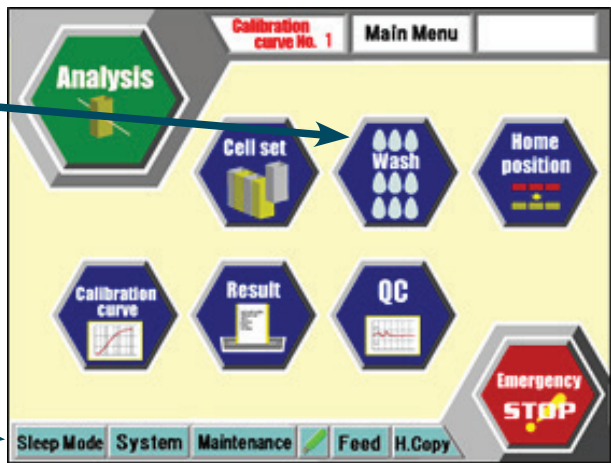
- Remove any racks from the Output Tray
- Set the Input/Output trays correctly in position

# Shutdown Operation

1. Touch [Wash] to perform priming.

\* Before an extended period of inactivity, replace the Buffer Reagent with dH<sub>2</sub>O and then perform the [WASH] at least 2 times

2. Once priming is complete, touch [Sleep Mode] in the lower left of the screen.

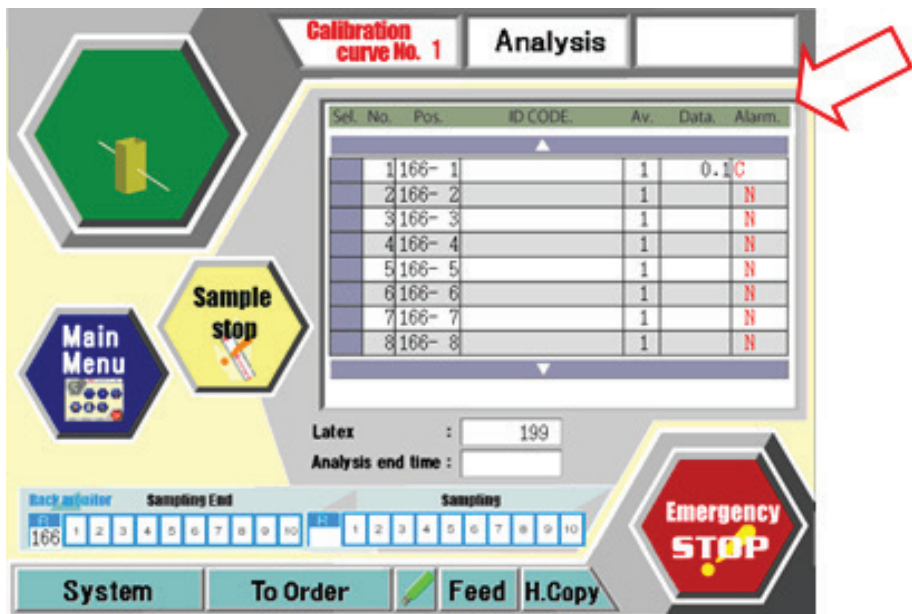


## Sleep Mode Screen

- The machine will start up at the displayed date and time.
- Check that the date is that of the next working day. Touch the date to change it. Enter a time at least one hour before the scheduled start of analysis.
- After checking the above, touch [Sleep Mode NOW].
- The screen blanks and enters Standby Mode.
- To restart, touch the screen and touch [Yes] to display the initial screen.



# Alarm Displays on the Analysis Monitor



Alarm		
C	Barcode error	Sample barcode is illegible
Q	Order confirmation error	No order, or no response to order
N	During automatic analysis	Sample sensor Off
	During manual order analysis	There is an order, but the sample sensor is Off
F	During manual order analysis	There is no order, but the sample sensor is On
T	Feed error	There is a feed error
P	Prozone	Check reaction trace and if sample is overfilled
B	Blanking error	Check latex and buffer

# Barcode Read Messages

When a sample barcode has been set, the following barcode read message is printed together with the results printout:

Message	
Number of 1-16 digits	Normal
No reading	There is a sample, but reading is not required When placed in an STD or CTL rack
No Sample	There is no sample
Barcode Error xxx	Barcode reading resulted in an error xxx is the error message reference

# HM-JACKarc

## Faecal Immunochemical Testing

### Operation Guide

#### Ordering Information

Product code	Description	Pack Size
065553	EXTEL HEMO AUTO HS Latex	4 x 18ml
065556	EXTEL HEMO AUTO HS Calibrator	8 x 1ml
065557	EXTEL HEMO AUTO HS Control	8 x 1ml
065555	EXTEL HEMO AUTO Buffer	1 x 250ml
063631	EXTEL HEMO AUTO MC Collection Picker	200 pieces
063632	EXTEL HEMO AUTO MC Collection Picker	400 pieces
053150	HM-JACK Reaction Cell	1000 pieces
053151	HM-JACK Sample Cup	500 pieces
057848	HM-JACK Print Paper A	2 rolls
052404	Wash Liquid (Auto Detergent H)	1 x 200ml

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#### Additional Consumables

Product code	Description	Pack Size
PIC-01000-01	Picus 50-1000µl 1-Channel Pipette	Each
791002	10-1000µl Biohit Tip Refill Pack Non Sterile	10 x 96
791003	10-1000µl Biohit Tip Refill Pack Sterile	10 x 96
791001	10-1000µl Biohit Tip Single Tray Sterile	10 x 96
721006	Pipette tip cone filter set, 1000µl	50
730981	Charging Stand	Each

#### Service Hotline:

02380 487239

#### Chris Scoble - Service Manager:

078318 85526

#### Kayleigh Roberts - FIT Senior Product Manager:

07831 513151

#### All other enquiries:

02380 487204

#### Alpha Laboratories Limited

40 Parham Drive

Eastleigh, Hampshire

SO50 4NU United Kingdom

Ordering hotline: 0800 387 732

Email: [digestivedx@alphalabs.co.uk](mailto:digestivedx@alphalabs.co.uk)

Web: [www.faecal-immunochemical-test.co.uk](http://www.faecal-immunochemical-test.co.uk)

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