



**STANDARD OPERATING PROCEDURE**

<b>Department:</b> Quality Control	<b>SOP No.:</b>
<b>Title:</b> Operation and Calibration of Infra-Red Moisture Balance	<b>Effective Date:</b>
<b>Supersedes:</b> Nil	<b>Review Date:</b>
<b>Issue Date:</b>	<b>Page No.:</b>

**1.0 OBJECTIVE:**

To lay down a procedure for Operation and Calibration of I.R. Moisture Balance.

**2.0 SCOPE:**

This procedure is applicable to operation and calibration of I.R. Moisture Balance in the Quality Control Department.

**3.0 RESPONSIBILITY:**

Officer, Executive - Quality Control Department.

Head - Quality Control Department.

**4.0 DEFINITION(S):**

NA

**5.0 PROCEDURE:**

**5.1 Balance Setting:**

5.1.1 Adjust the Spirit Level in the Center Position using Leveling Screws.

5.1.2 Switch "ON" the main power supply. Balance displays :

**OFF**

5.1.3 Press the I/O key to "ON/OFF" the balance.

5.1.4 Balance will perform self test and display –

**0.000g**

5.1.5 Press the 'TARE' Key to get Zeros on the display.

5.1.6 To open/close the door, press ↑↓ Key.

5.1.7 If the balance shows on the display it means balance is 'OFF'.

**OFF**



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5.1.8 If the balance shows on the display it means balance is in 'STAND BY' mode.

STANDBY

5.1.9 If the balance shows on the display it means balance is 'BUSY'.

◇

5.1.10 If the balances show on the display it means balance is 'STABLE'.

0.000g

## 5.2 Operation:

5.2.1 Load particular program. To load program Press "**Prog**" Soft key Then list of programs is displayed in display unit. Then Select Program no. by ▲ or ▼ Soft Key To 'Load' program press Load Soft Key.

5.2.2 After loading program a message "**TARE SAMPLE PAN**" appears on display press ↑↓ Key to open the door .place the sample dish on weighing pan. Tare the sample dish by pressing '**TARE**' Soft KEY.

5.2.3 Now a message "**LOAD SAMPLE**" appears on the display. Then load the sample on dish evenly so that it spread uniformly. Then press '**START**' soft key to start the analysis.

5.2.4 After the end of analysis beep comes for three times and then note down the result of analysis.

## 5.3 Calibration:

### 5.3.1 Internal Calibration:

5.3.1.1 For Calibration procedure press 'TEST'.

5.3.1.2 Select the weighing system settings and then Select them Internal Calibration / Adjustment.



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5.3.1.3 Tare the Weighing pan by pressing 'TARE' soft key then press 'START' soft key to start the calibration.

After completion of the calibration display shows the difference to be adjusted then press 'ADJ' soft key.

5.3.1.4 After completion of Adjustment The display is as shown below.

0.000g

5.3.1.5 Then press " End "soft key to come to selection mode of calibration Then press CF key to come to normal mode

**5.3.2 External Calibration:**

5.3.2.1 For External calibration procedure press 'TEST' key

5.3.2.2 Select the weighing system settings and then Select then Weighing.

5.3.2.3 Load the pan with the weight 1 g and note down the display reading in Annexure I.

5.3.2.4 Similarly load the pan with weight 2 g , 5 g , 10 g , 20 g and note down the display reading in Annexure I.

5.3.2.5 Frequency – Once in month.

**5.3.3 Temperature Calibration:**

5.3.3.1 Calibration of Temperature is done by External Agency.

5.3.3.2 Frequency - Yearly

5.3.3.3 Fill the calibration status on metallic calibration label of the instrument, record the calibration results in annexure-I

5.3.3.4 If instrument is out of calibration, affix "UNDER MAINTENANCE" and call for service engineer.

5.3.3.5 Note down the Calibration Activity in Instrument logbook.

**5.4.1 Cleaning :** The outside body of the I R Moisture balance should be wiped with a clean dry cloth and the inner sample compartment should be cleaned using non shredding brush.



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**5.5 Precaution:**

5.5.1 Instrument should be placed on stable, vibration free and leveled support.

5.5.2 Instrument should not be placed in hazardous area.

5.5.3 Clean the Instrument properly before and after use.

**6.0 ABBREVIATION(S):**

IR. : Infra red

QCD - Quality Control Department.

SOP - Standard Operating Procedure.

**7.0 REFERENCE(S):**

NA

**8.0 ANNEXURE(S):**

Annexure – I: Calibration Record of I.R. moisture balance.

**9.0 REVISION CARD:**

S.No.	REVISION No.	REVISION DATE	DETAILS OF REVISION	REASON (S) FOR REVISION



**PHARMA DEVILS**  
QUALITY CONTROL DEPARTMENT

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**ANNEXURE I**

Calibration Record: I.R. Moisture Balance			
<b>Location</b>		<b>Model No.</b>	
<b>Make</b>	Sartorius	<b>Identification No.</b>	
<b>Calibration Done On</b>		<b>Calibration Due On</b>	
<b>Reference SOP No.:</b>			<b>Page No. : 5 of 1</b>

S.No.	Theoretical weight (in g)	Mass/Actual weight (in g)	Observed weight (in g)	Limit + 0.1 % of actual weight (in g)	Remarks
1.	1.0				
2.	2.0				
3.	5.0				
4.	10.0				
5.	20.0				

**Remarks:** The Instrument Calibration **Complies / Does Not Comply.**

**Calibrated By:**

**Checked By :**

**Date:**

**Date:**