ELECTRONICS AND QUALITY DEVELOPMENT CENTRE

(Under STQC Programme, DIT, Ministry of Commn. & Information Technology, Govt. of India)
(B-177/178, GIDC Electronics Estate, Sector-25, Gandhinagar - 382 024, Gujarat.)

REPORT NO.: ENV/G-0182/0458/2020

TEST REPORT

Name & Address of the Customer	**M/s. Central Medical Services Society** Ministry of Health & Family Welfare GOI 2nd Floor Vishwa Yuvak Road, Teen Murti Marg, Chanakayapuri, New Delhi – 110 021
Sample Received from	**Central Medical Services Society** Kolkata Warehouse
Reference :-	
Service Request Form No. :	G-0182/2020
SRF Date :	11/03/2020
Date of receipt of the Item/ Sample :	09/03/2020
Condition of Item/Sample on receipt :	Good
Test Report :-	
Date of Issue :	20/04/2020
Date of Testing :	11/03/2020 to 23/03/2019
Location Where Test is Performed :	LAB, EQDC Gandhinagar

DESCRIPTION OF THE ITEM/ SAMPLE UNDER TEST

Item Nomenclature:	**Vaccine Carrier** (with 4 ice pack of 0.3 ltr.)
Make/Model/Part No. :	-- / AVC-43
Quantity/ No. of samples :	01
Serial No.(s)/Identification No. :	171G119
Sample Code :	VCMAVC43
Sample Batch No.:	171G119
Test Category :	Performance Test
Test Procedure:	As per CMSS work order no. CMSS/QA/2019-20/CC/001/1625, Dtd. 27.08.2019 and With reference to : WHO/PQS/E004/VC01-VP.2

Nomenclature	Make/ Model	Sl. Number	Calibration Due Date
Climatic Chamber	WeissTechnik/ C-340/70	54260004990020	02/08/2020
Dry Heat Chamber	Blue Star / DHC125	ETC-359-F-2000	14/08/2020
Temperature Test Chamber	WeissTechnik/ C-340/70	54260004990010	01/08/2020
Data Acquisition System with Sensors	Fluke ~ 2638A	26710044	15/05/2020
Steel Scale	Kristeel / 401F	MECH/SC/01	12/07/2020
Digital Vernier caliper	Mitutoyo / CD-8"	0003306	10/07/2020
Digital Weighing Balance	Swisser /SWII 051	2150913	03/04/2020
Indicator with Loadcell	Axpert / AXP-500	0912089	19/11/2019

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TEST RESULT

Sr. No.	Test Parameters	Performance specification	Observation	Remarks
1	Vaccine storage capacity	• Long range: 1.0 to 2.0 litres	1.35 litre Meets the requirement	Complied
2	Shape	Containers must be substantially square or rectangular in plan and section Rounded corners are permitted.	Rectangular with rounded corners	Complied
3	Design Principles	The design of container, including the placement of the packs and of the load, must promote the free circulation of air with in the container to ensure minimum temperature stratification. Container design should seek to minimize the weight of icepacks required to meet the cold life requirement.	Meets the requirements	Complied
4	Vaccine storage advice	Cold boxes must carry factory-fitted non-removable labels designed to last the lifetime of the appliance. Labels should be in the UN language most appropriate to the country for use (Arabic, English, French, Mandarin Chinese, Russian or Spanish, or other language, by special order)	Provided in English Meets the requirement	Complied
5	Stacking and handling	The design of the base and lid of the container should include moulded features that allow multiple units of the same model to be stacked on top of one another in a safe and stable manner. The base of the container must be designed to withstand repeated dragging across hard rough floor surfaces.	Meets the requirement	Complied
6	Robustness	The container must withstand a one meter drop onto each face, edge and corner (total 26 times) at its rated fully-loaded weight. At the end of the test there must be no damage that affects the performance of the product and the lid must still close and latch correctly. Acceptance: min acceptable ratings are: Casing 2, Fittings 2. Rejection: Failure to achieve rating 2 or above for either or both of the casing and fittings tests.	Meets the requirement Ratings Casing - 3: Superficial damage Fittings- 3: Hinges, catches and handles function properly	Complied

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Sr. No	Test Parameters	Performance specification/requirement	Observation	Remarks
7	Dimensions, weights and vaccine storage capacity	Vaccine storage capacity: 1-2 Ltr.	1.35 litre	Complied
		Weight Fully loaded inclusive of water filled icepacks< 5 kg	3.49 kg	Complied
		Weight empty (with icepack) < 3kg	2.27 kg	Complied
		Insulation thickness: 30-50 mm	40 mm	Complied
		External Dimensions (W X D X H)	250 X 250 X 300 mm	--
		Internal Dimensions (W X D X H)	166 X 166 X 220 mm	--
		Ice Pack Detail:		
		Type of Ice Pack: 0.3 Ltr.	0.3 Ltr	Complied
		No. of Ice Pack	4 Nos.	--
		Ice Pack Dimension: 163 X 90 X 33 ±1mm	163 X 90 X 33 ± 1 mm	Complied
		Empty Weight – Icepack: 75-80 gm	76gm	Complied
		Ice pack Robustness: The Ice packs samples shall withstand a one meter drop on every face, edge and corner when in a frozen state (-10°C to -20°C). It shall then successfully pass the leakage test	Meets the requirement	Complied
		Leakage test: No leaks when 80kg lateral force is applied	Meets the requirement No leakage found	Complied
8	Foam Pad	Soft foam and minimum 30 mm thickness; Fit tightly inside the neck of the carrier on top of the ice packs, under the lid Vaccine carrier should not have any slit cut into it for insertion of vaccine vial. However, puff insulation should be retained.	Soft foam Thickness : 30.80 mm	Complied

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Sr. No.	Test Parameter	Test Condition / Requirement	Observation	Remarks
9	**Cold Life** @ 43°C	**Test Condition**: Test chamber at +43.0°C (± 0.5° C) **Step 1:**Stebilize the container in the +43 °C test chamber for a minimum of 24 hours, with the lid open. **Step 2:** Assemble a dummy vaccine load to replicate the maximum vaccine load established in test 2, and fit it with 'T' type thermocouples, laid out as shown in Annex 1. Stabilize the load in a refrigerator at +5.0 ° C(± 0.5°C) **Step 3:** Fully freeze the set of pack at -20.0°C (± 0.5°C) line the container with the ice-packs in accordance with the manufacturer's instructions. Place the instrumented and pre-conditioned vaccine load in the container and close the lid. **Step 4:** Monitor temperature at one minute intervals unit the temperature of the warmest point in the vaccine load first reaches +10.0°C. Record the temperature of the coldest point in the load at this time. The cold life is defined as the time interval from the moment when the coldest point in the load first passes -3°C until the temperature of the warmest point first reaches +10.0°C. **Step 5:** Open the lid at the moment when the warmest point in the load first reaches +10.0°C. **Requirement :** The cold-life should be more than 36 hours	**Cold Life** : 39 Hrs	Complied

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Sr. No.	Test Parameter	Test Condition / Requirement	Observation	Remarks
10	**Cool Life**	**Test Condition**: Test chamber at +43C (±0.5°C).. **Step 1 :** Stabilize the container in the +43°C test chamber for a minimum of 24 hours, with the lid open. **Step 2 :** Assemble a dummy vaccine load described in Test 3, Step 2. Stabilize the load in a refrigerator at +5.0°C (±0.5°C).. **Step 3 :** Re-fill the packs following the procedure described in Test 2, Step 4. **Step 4 :** Stabilize the filled packs at +5.0°C (±0.5°C).. Line the container with the cool-packs in accordance with the manufacturer's instructions. Place the instrumented and pre-conditioned vaccine load in the container and close the lid. **Step 5 :** Monitor temperatures at one minute intervals until the temperature of the warmest point in the vaccine load first reaches +20.0°C. Record the temperature of the coldest point in the load at this time. The cool-life is defined as the time interval from the moment when the lid is closed until the temperature of the warmest point first reaches +20.0°C. **Requirement :** No standard set, but results will be published	8 Hrs.	--

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Sr. No.	Test Parameter	Test Condition / Requirement	Observation	Remarks
11	**Warm Life**	**Test condition:** Test chambers at -20.0 (±0.5°C) and + 18.0°C). **Step 1 :** Stabilize the container in the +18°C test chamber for a minimum of 24 hours, with the lid open. **Step 2 :** Assemble dummy vaccine load described in Test 3, Step 2. Stabilize the load in a refrigerator at +5.0°C **Step 3 :** Stabilize the filled packs at +18.0°C (±0.5°C). Line the container with the warm-packs in accordance with manufacturer's instructions. Place the instrumented and pre-conditioned vaccine load in the container and close the lid. **Step 4 :** Place the loaded vaccine carrier in the -20°C test chamber . **Step 5 :** Monitor temperatures at one minute intervals until the temperature of the coldest point in the vaccine load first reaches 0.0°C. Record the temperature of the warmest point in the load at this time. The warm-life is defined as the time interval from the moment when the lid is closed until the temperature of the coldest point first reaches 0.0°C. **Requirement :** No standard set, but results will be published	7 Hrs	--

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EUT Photograph:

Remarks:

1. The sample conforms to the technical specification specified by customer (CMSS- Central Medical Services Society) and with reference to: WHO/PQS/E004/VC01-VP.2 for above mentioned tests.
2. Hologram stickers having Serial numbers from 466437 to 466443 are serially affixed on each page of test report.

NOTE

1. This report relates only to the particular sample(s) received for testing in good condition at EQDC Gandhinagar.
2. This report shall not be reproduced except in full without the written approval from Director, EQDC (Gandhinagar).
3. The test results reported are valid at the time of and under the stated condition of measurement.
4. Only the test asked for by the customer has been carried out. Any anomalies/ discrepancies in this report should be brought to our notice within 45 days from the date of issue of this report.

CAUTION

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Authorized Signatory : **Name : H.G. Chavda** **Designation: In Charge, Lab**	**Issued by :** D Chavda. **Name : DIPAK CHAVDA** **Designation: In Charge, CSC**

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Officer In-Charge
Customer Service Cell

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