Conformity Review Certificate

Reference: Rudolph Research Analytical Density Meter

Serial Number:	
Model:	
Date of Manufacture:	
Customer Name/Location:	

Please use this certificate as conformation that the instrument detailed above has passed all Rudolph Research Analytical internal quality control procedures and meets all published operational specifications as found in the Service Specification Guide.

Upon inspection the aforementioned instrument met all performance and operation criteria according to the data contained within this notebook.

RUDOLPH RESEARCH ANALYTICAL

Operator: (Print)		**Operator: (Signature)**		**Date:**	
Reviewer: (Print)		**Reviewer: (Signature)**		**Date:**	

Authorized Signatories are:

- Customer acceptance personnel for on-site installation / repair
- Rudolph Quality Control Personnel for Factory Service

Service Performance Verification

Instrument Specifications			
Serial Number:		**Software Version:**	
Model Number:		**Firmware Version:**	
Date of Manufacture:		**Date of Verification:**	
Additional Features:			
Customer/Location:			

Step 1: Accuracy and Repeatability

Measurement Accuracy and Repeatability, Table #1, *(see Note #1)*

Sample & Temp	Standard Expected Value	Combined Tolerance (g/cm^3)	Measurement Result (g/cm^3)	Error	Repeatability (SD n=3)	Repeatability Limit	Pass/ Fail
Water at 20°C	0.998203						
Water at 20°C	0.998203						

Measurement Accuracy and Repeatability, Table #2, *(see Note #1)*

Sample & Temp	Standard Expected Value	Combined Tolerance (g/cm^3)	Measurement Result (g/cm^3)	Error	Repeatability (SD n=3)	Repeatability Limit	Pass/ Fail
Water at 25°C	0.997043						
Water at 25°C	0.997043						

Step 2: Measurement and Temperature Accuracy using traceable standards, (see Note #2)

Reference Standard #	Temperature (°C)	CRM Label Value (g/cm^3)	Combined Tolerance (g/cm^3)	Measurement Result (g/cm^3)	Error	Pass/ Fail
# 1						
# 2						

Standards Used:

Reference # above	Standard Name	Standard Lot #	Certificate Issue Date	Expiration Date
#1				
#2				

Step 3: Temperature Accuracy Verification (Optional, see Note #4)

☐ **Optional test, if this box is checked, the Temperature Accuracy Verification section will not be completed, see Note #4 below.**

Thermometer Model or Serial number:	Probe Serial number:

Set Temperature	Density Meter's Cell Temperature	Measured Temperature on Thermometer	Delta	Pass / Fail
20.00°C				
25.00°C				
Optional:				

Note #1: A two point Air/Water calibration adjustment may be done at each temperature (20ºC & 25ºC) prior to measurements. However, for Series 3 and Series 4 Density meters, this two point Air/Water calibration may be done at 20ºC only as this Series features an enhanced single temperature calibration at 20ºC that is extendable across the entire temperature range.

Note #2: The Combined Error for the Traceable Standard Measurement is the Instrument Error located in the applicable Rudolph Research Analytical Service Specification Guide plus that of the allowed error of the NIST Traceable Standard being used. The error for the NIST Traceable Standard can be found on the Certificate of Calibration provided with the NIST Traceable Standard.

Note #3: Measurement and Temperature Accuracy Using Traceable Standards. If you do not have a Rudolph Research Analytical approved thermometer, the use of two density standards may be used in lieu of temperature testing with a thermometer. **The use of two traceable density standards is considered by the manufacturer as superior to the On-Site temperature Accuracy verification.**

Note #4 (Optional): Temperature Accuracy Verification. You will need to have a RRA approved Thermometer to complete step #3. If you do not have a RRA approved Thermometer to perform this test, you must perform Step #2: Accuracy Verification using Traceable Standards section.

- Fluke Hart Thermometer = ±0.04ºC
- Note: Alternate Thermometers can be used, please contact factory for further assistance.
- Total combined allowable error is that of the density meter plus the temperature measurement system used. Allow 20 – 30 minutes at each temperature for the most accurate results.

Operator: (Print)		**Operator: (Signature)**		**Date:**	
Reviewer: (Print)		**Reviewer: (Signature)**		**Date:**	