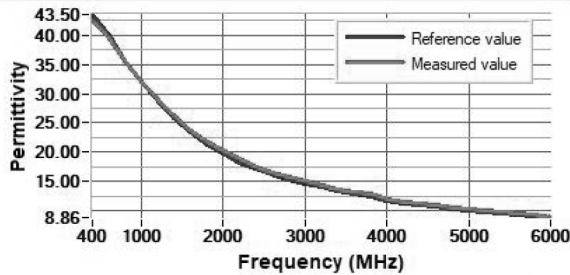
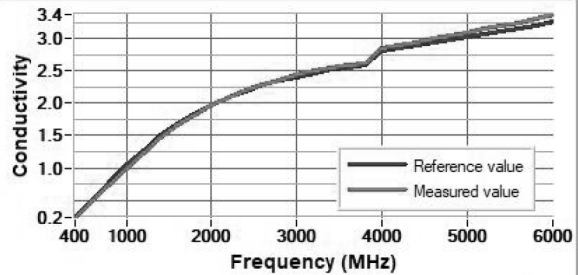


6.1 LIQUID PERMITTIVITY MEASUREMENT

A liquid of known characteristics (methanol or ethanediol) is measured with the probe and the results (complex permittivity $\epsilon' + j\epsilon''$) are compared with the reference values for this liquid.



Frequency (MHz)	Ethanediol Permittivity (Reference)	Ethanediol Permittivity (Measure)	Difference (%)	Limit (+/- %)
400	43.50	42.34	2.2	10.0
600	39.92	39.37	1.4	10.0
800	35.68	35.51	0.3	10.0
1000	31.98	32.06	-0.2	10.0
1200	28.77	29.01	-0.8	10.0
1400	25.86	26.26	-1.6	10.0
1600	23.36	22.78	-1.8	10.0
1800	21.33	21.68	-1.7	10.0
2000	19.78	20.82	-3.2	10.0
2200	18.27	18.78	-2.8	10.0
2400	17.17	17.48	-1.8	10.0
2600	16.16	16.79	-2.0	10.0
2800	15.29	15.74	-2.9	10.0
3000	14.60	14.97	-2.5	10.0
3200	14.03	14.51	-2.0	10.0
3400	13.49	13.75	-1.9	10.0
3600	12.95	13.24	-2.3	10.0
3800	12.53	12.83	-2.3	10.0
4000	11.62	11.29	-2.3	10.0
4200	11.28	11.53	-2.3	10.0
4400	10.97	11.23	-2.3	10.0
4600	10.68	10.96	-2.1	10.0
4800	10.40	10.60	-1.9	10.0
5000	10.11	10.39	-1.8	10.0
5200	9.85	10.01	-1.7	10.0
5400	9.59	9.73	-1.5	10.0
5600	9.35	9.48	-1.5	10.0
5800	9.14	9.25	-1.0	10.0
6000	8.86	8.95	-1.0	10.0



Frequency (MHz)	Ethanediol Conductivity (Reference)	Ethanediol Conductivity (Measure)	Difference (%)	Limit (+/- %)
400	0.24	0.23	3.5	8.2
600	0.50	0.46	6.9	8.2
800	0.78	0.74	5.4	8.2
1000	1.05	1.00	4.6	8.2
1200	1.27	1.20	3.4	8.2
1400	1.50	1.47	1.8	8.2
1600	1.69	1.64	1.8	8.2
1800	1.84	1.81	2.0	8.2
2000	1.97	1.94	0.4	8.2
2200	2.09	2.09	0.1	8.2
2400	2.19	2.22	-0.8	8.2
2600	2.29	2.29	0.1	8.2
2800	2.36	2.34	-0.1	8.2
3000	2.41	2.44	-1.2	8.2
3200	2.47	2.50	-1.5	8.2
3400	2.52	2.55	-1.0	8.2
3600	2.56	2.59	-1.3	8.2
3800	2.59	2.61	-1.3	8.2
4000	2.81	2.85	-1.5	8.2
4200	2.85	2.90	-1.8	8.2
4400	2.89	2.94	-1.7	8.2
4600	2.95	3.01	-2.1	8.2
4800	3.00	3.06	-2.1	8.2
5000	3.03	3.11	-2.3	8.2
5200	3.07	3.15	-2.6	8.2
5400	3.12	3.20	-2.7	8.2
5600	3.15	3.25	-3.0	8.2
5800	3.21	3.30	-3.0	8.2
6000	3.26	3.38	-3.5	8.2



7 LIST OF EQUIPMENT

Equipment Summary Sheet				
Equipment Description	Manufacturer / Model	Identification No.	Current Calibration Date	Next Calibration Date
LIMESAR Test Bench	Version 3	NA	Validated. No cal required.	Validated. No cal required.
Liquid measurement probe	MVG	SN 35/10 OCPG37	11/2022	11/2023
Network Analyzer	Rohde & Schwarz ZVM	100203	08/2021	08/2024
Network Analyzer	Agilent 8753ES	MY40003210	10/2021	10/2024
Network Analyzer – Calibration kit	Rohde & Schwarz ZV-Z235	101223	05/2021	05/2024
Network Analyzer – Calibration kit	HP 85033D	3423A08186	06/2021	06/2027
Temperature / Humidity Sensor	Testo 184 H1	44225320	06/2021	06/2024