

**Laboratory** Transformer Oil Testing Lab, Training Institute, Dr. NTPS,  
APGENCO, Ibrahimpatnam, Krishna district, Andhra Pradesh

**Accreditation Standard** ISO/IEC 17025: 2005

**Certificate Number** TC-6579

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**Validity** 29.11.2017 to 28.11.2019

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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**ELECTRICAL TESTING**

I.	ELECTRICAL MATERIALS – LIQUID DIELECTRIC MATERIALS			
1.	Transformer Oil	Break down voltage	IS 6792:1992 (RA 2013)	1.2 kV to 100 kV
		Dissolved Gas Analysis (DGA)		
		Gases	IS 9434:1992 (RA 2013)	Limit of Detection:
		- CO	IS 10593: 2006 (RA 2011)	5 ml/l (5 ppm)
		- CO <sub>2</sub>	IEC 60599 (1999)	Limit of Detection:
				5 ml/l (5 ppm)
		- C <sub>2</sub> H <sub>4</sub>		Limit of Detection:
				1 ml/l (1 ppm)
		- H <sub>2</sub>		Limit of Detection:
				1 ml/l (1 ppm)
	- C <sub>2</sub> H <sub>2</sub>		Limit of Detection:	
			1 ml/l (1 ppm)	
		Inter facial tension	IS 6104: 1971 (RA 2011)	1 N/m to 90 N/m
		Density	IS 1448 (Part 16):1990 RA 2013	0.7 g/cc to 1 g/cc
		Water content	IS 13567:1992 (RA 2013)	0.01 mg/l to 200 mg/l 1 ppb to 200 ppm
		Specific resistance	IS 6103:1971 (RA 2011)	10 <sup>9</sup> Ωcm to 10 <sup>16</sup> Ωcm
		Tan delta	IS 6262 :1971 (RA 2011)	0.00001 to 1