

OIL QUALITY ASSESSMENT

Checking the functionalities of oils for rotating machinery

WHAT?

Laborelec trends the quality of lubricating and hydraulic oils in service to assess to what extent these oils still retain their functional properties (lubrication, heat exchange, corrosion protection, and elimination of internal contamination).

WHY?

To determine that oils remain within OEM or industry maintenance specifications (for instance ASTM D4378).
To prevent sludging, varnishing, and corrosion as well as machinery wear due to insufficient lubrication.
To avoid unforeseen maintenance costs and shut downs.

HOW?

Oil quality can be accurately assessed by combining the results of different physical and chemical oil analyses.
If certain parameters prove to be insufficient, our experts determine the most appropriate maintenance actions or oil bath replacement.



The MPC or VPI test allows to assess the risk on varnish formation in degraded oil circuit.

Frequency of analysis: every 3 to 12 months



The determination of acidity is a basic analysis for trending ageing in turbine and hydraulic oils.

ANALYSIS	METHOD	REQUIRED OIL VOLUME
Additives	ASTM D5185	50 ml
Chlorine	Laborelec method	100 ml
Color and appearance	ISO 2049	50 ml
Density (**)	ASTM D4052	50 ml
Desaeration	ISO 9120	200 ml
Desemulsibility	ISO 6614	100 ml
Filtration (0,8 µm)	ASTM D4055	200 ml
Fire point (Cleveland OC)	ASTM D92	200 ml
Flash point (Cleveland OC)	ASTM D92	200 ml
Flash point (Pensky Martens CC)	ASTM D93/ISO 2719	200 ml
Foaming	ISO 6247	400 ml
FTIR spectrum	Laborelec method	50 ml
Inhibitor (type amine)	IEC 60666	50 ml
Inhibitor (DBPC) (**)	IEC 60666	50 ml
Neutralization index, acidity (**)	ASTM D664	25 ml
Particle counting (**)	ISO 4406 (1987)/NAS 1638	100 ml
Particle counting (**)	ISO 4406 (1999)/SAE AS4059	100 ml
Pour point	ISO 3016	100 ml
Resistivity (mineral oil/phosphate ester)	IEC 60247	100 ml
Sediment (fuel centrifugation)	ASTM D1796	100 ml
Sediment (fuel filtration)	EN 12662	100 ml
Sulphur content	ASTM D5185	25 ml
Varnishing Potential Index (VPI)	Laborelec method	200 ml
Viscosity (**)	ASTM D7042	50 ml
Viscosity	ISO 3104	50 ml
Water content	ASTM D1744	25 ml

(**): Analyses performed under ISO 17025 accreditation – Measurement uncertainties available on demand