HTek

ANADIS INSTRUMENTS BENELUX B.V.

HTEK INSTRUMENT

COMPASS 4294-Portable XRF Sulfur in Oil Analyzer

Simply the Best

Your Portable Lab Element Analyzer that goes anywhere

Robust bench-top XRF Analyzer offers immediate plug-and-play operation

High sensitivity with low detection limit

Meeting new sulfur limits for marine fuel oil

METHOD COMPLIANCE

- ASTM D4294
- ISO 20847 ISO 8754
- IP496

SIMPLY THE BEST

COMPASS 4294-Portable XRF Sulfur in Oil Analyzer

Background

Quick on-site analyzing the Sulphur content of fuel oil on-board a ship with minimum operation is essential for the shipowners and operators to comply with the latest IMO (MARPOL) regulations.

The IMO (International Maritime Organization) continuously sets new standards to minimize and control the harmful polluting exhausts from vessel engines. IMO is the World's largest maritime organization with over 170 member states and acts as a regulatory agency for the international maritime industry.

These regulations are enforced both globally and locally by each country and failure to comply can lead to heavy penalties.
Based on standard method such as ASTM D4294 and ISO 8754, XRF spectrometer is one of the most effective technology of establishing fuel compliance with the Sulphur and other elements regulations
It will be essential and compulsory for each vessel to comply with the Sulphur limits of 0.10% m/m in SECAs or 0.50% m/m in all other areas worldwide.

Meanwhile other similar sulfur control is widely applied, for example In India, all automotive diesel and gasoline was transitioned to Bharat IV with a 50 ppm maximum sulfur in April 2017.
Maximum permissible level of sulfur in fuel in Europe for 2003/17/EC (or EURO VI) directive requires a maximum amount of sulfur in fuel of 10 ppm.
Aviation Turbine Fuels specifications such as ASTM D1655 and D6615 require a maximum sulfur of 3000 ppm.

Introduction

The Compass 4294 Energy-Dispersive X-Ray Fluorescence (EDXRF) systems was especially designed for on-board total sulfur content analysis in wide concentration range from ppm to percent levels.
The portable compact design with low detection limits and high accuracy makes the Compass 4294 the ideal tool for sulfur testing at sea,offshore or on land.

Features and Benefits

- Portable, rugged, compact design for total non-destructive sulfur analysis
- Quick analysis in 130 seconds per sample with minimum sample preparation
- User-friendly software and One-touch measurement start for testing
- Training for routine analysis takes only minutes
- Low cost of daily analysis without any gas consume
- Built for tough environments
- Intuitive interface displayed on the large 8 inches touchscreen
- Low cost of maintenance

Key Applications

Analysis of Sulfur content in bunker diesel fuels
Analysis of hydrocarbon samples of heating oil, kerosene, jet A, vacuum gas oil (VGO), and crude oil
Analysis of Cl, Mg and K in marine fuel
Analysis of catalysts in the fuel- avoiding engine failure

Specifications

Detector	High Resolution SDD
Excitation Source	high efficiency micro tube 50kv Max， 200uA Max
Working temperature	-20 to 50 ℃
Test environment	Air(4294) and vacuum(4294 Plus)
Measuring time per sample	130 seconds
Sample Type	Liquid, powders and solids
Factory Calibration	Low sulfur: 10ppm- 100ppm High sulfur: 0.01%-5%
Detection Limit of Sulfur	3.8ppm(Air)- Compass 4294 1.5ppm(Vacuum)- Compass 4294 Plus
Instrument Dimension	270mm*320mm*230mm(L*W*H)
Sample Chamber Dimension	170mm*110mm*17mm(L*W*H)
Weight	9.4 kg
Operation touch Screen(1280*800)	8 inches Windows 10 based OS
External Connection	USB Port, Blue-tooth, Wi-Fi, GPS
Test Report	Excel, PDF
Consumables	Sample test Mylar Oil analysis sample cup Sampling pipette Test window film

High precision results without daily calibration needed.

Test report of Sulfur in oil standard samples

Model	Compass 4294	Test Time: 130 seconds		
No.	Calibration Curve	**Sample 1**	**Sample 2**	**Sample 3**
1	Mineral Oil	315	0.1035	1.0085
2	Mineral Oil	303	0.1026	0.9905
3	Mineral Oil	305	0.1021	0.9995
4	Mineral Oil	299	0.1035	1.0095
5	Mineral Oil	292	0.1025	0.9978
6	Mineral Oil	307	0.1033	1.0088
7	Mineral Oil	311	0.1048	0.9986
8	Mineral Oil	305	0.1016	0.9999
9	Mineral Oil	307	0.1015	1.0095
10	Mineral Oil	295	0.0995	0.9988
Certified Value		300ppm	0.1000%	1.0000%
Average Test Result		304	0.1025%	1.0021
Standard Deviation S_n		6.9992	0.0014	0.0065
RSD		2.30%	1.41%	0.65%

We offers a full range of technical support to keep you up and running.

Our Service

> On-site installation and service by factory engineer

For a in-depth training and technical support

> Remote diagnostics

On-line support over the internet for a fast response to your problem

> Preventive maintenance

Ensures your analyzer produces the right result year after year

> Free software upgrade

Keep the system running always with the latest version program

> Consumables and accessories

From sample preparation to calibration standards.

HTek

ANADIS
INSTRUMENTS BENELUX B.V.

ANADIS INSTRUMENTS BENELUX B.V.
Address: Guadeloupestraat 30,
1339 ME Almere, The Netherlands
Tel: +31(0)36 521 41 90
E-mail: info@anadis.nl
Web: http://www.anadis.nl/

SIMPLY THE BEST