

PRODUCT DATASHEET

ClearView® db Saybolt Color Analyzer

Complete Analytical System for Measuring
Saybolt Color (ASTM D156, ASTM D604)



Real-time

Configurable

Continuous PAT

- VIS-NIR analyzer using dual-beam filter photometer technology
- Suitable for fuel color analysis and other petroleum products
- Color measurement with optional turbidity/haze measurement
- Sample interface, insertion probe or flow cell (20 or 50 mm optical pathlength)

Analytical System for Measuring Saybolt Color (ASTM D156, ASTM D6045)

The visual Saybolt color test is often used for manufacturing control purposes because it is an easy, rapid determination of product quality or contamination.

Saybolt color (reference ASTM D156, ASTM D6045) is primarily used in characterizing fuels including automobile and aviation gasolines, jet fuel, diesel fuel and other petroleum products. The Saybolt color scale varies from near water white (30) to dark yellow (-16). Both of these ASTM methods are off-line manual laboratory methods.

The original test design required an observer to compare the color of a product to a known standard, and then judge the "color." Using a GUIDED WAVE Saybolt Color Analyzer System to automate this measurement within a process, eliminates the visual judgement of a technician and delivers online real-time process control information to the process operators.

System Configuration

- Unique dual beam optics – for long term, stable operation
- Up to two (2) independent measurement points – for added analytical flexibility at reduced cost per point
- High efficiency yet rugged fiber optics – analyzer electronics can be located away from a hazardous sample point
- In-door touch screen or Ethernet (Modbus TCP) – easy local or remote analyzer operation and control
- Analytical calculations are all encoded in the software – answers and alarms are clearly reported

Accurate, Real-time Reliable Results

The Saybolt Color Analyzer System utilizes a multiwavelength ClearView® db filter photometer analyzer platform. It may be configured for either one (1) or two (2) independent sample monitoring points. The ClearView db analyzer is configured with application-appropriate wavelengths to measure the Saybolt color of the sample. The analyzer employs a dual-beam design – meaning; the system has a continual internal optical reference check that allows it to self-compensate for signal variation due to hardware drift. This ultimately provides the system with long term stability. The final product is a total Saybolt Color Analyzer System that measures the color variation without interference from other factors.

Complete Saybolt Color Analyzer System

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The Smart Choice

The Saybolt Color Analyzer System delivers accurate, real-time process measurement results. Its linearity and repeatability, as well as its low maintenance requirements make it a cost effective, smart choice to help optimize production, improve yields, ensure consistent product quality, and enhance profitability.

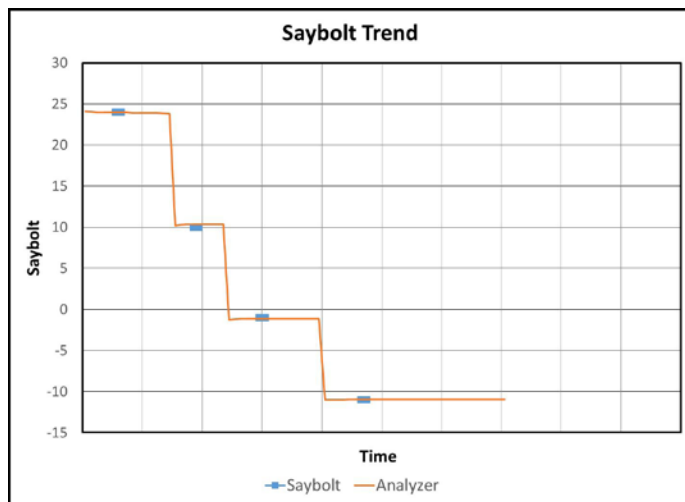
Options for a Custom Solution

Another advantage of the Saybolt Color Analyzer System is that it can be customized in many ways. For more information about specifications and analyzer operations review the ClearView db analyzer.

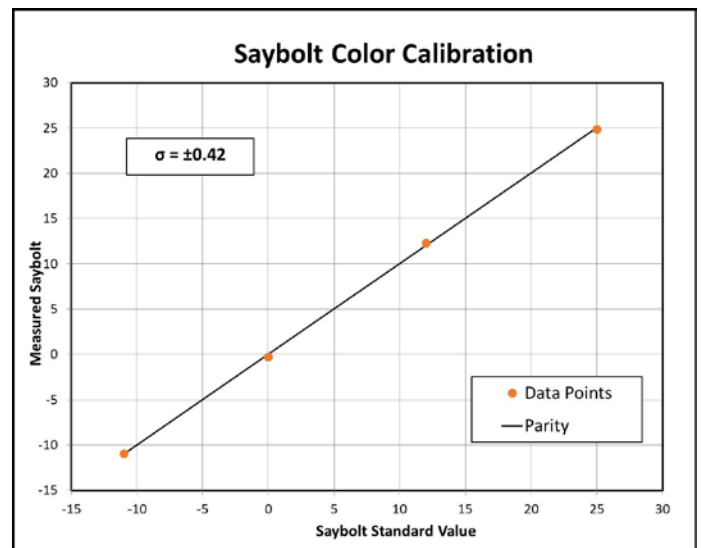
Specifications

Channels	2 sample channels, optional turbidity monitoring must use first channel
Analyzer Technology	Fiber optic dual-beam ClearView db photometer
Light Source/Life Tungsten Halogen	Tungsten-Halogen, >4000 hours typical
Fiber Optic Cable Connectors	SMA 905
Communications	Ethernet (TCP Modbus) standard
Photometric Noise	<50 μ AU 450-2100 nm 1 minute rms
Enclosure Options	General Purpose NEMA 4 unclassified Z-Purge, NEMA 4x, CI D2 X-Proof, ICEEx, ATEX, CI D1
Environmental	0 – 45°C, 0 – 90%, sun and rain sheltered
Photometric Drift	<500 μ AU rms/ °C
Response Time	1 second, minimum. user settable
Outputs (analog)	Up to 6 for a one channel unit; up to 4 per channel for a two channel unit 4 – 20 mA; customer powered
Outputs (discreet)	Up to 6 for a 1 channel unit; up to 4 per channel for a 2 channel unit contact closures
Inputs (analog)	4 (optional) 4 – 20 mA, isolated grounds
Local Display	LCD touch screen, color QVGA
Power	24 VDC, 3 A; 72 watts
Measurement Accuracy	Complies with ASTM methods D156 , D6045
Measurement Range	-16 to 30 Saybolt units (pathlength can be optimized to increase sensitivity)

Below is a typical trend chart monitoring Saybolt color of a continuous flowing process.



Below shows an initial calibration chart showing the measured values as compared to laboratory standard values.



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