Colour and Turbidity Meter

For on-line measurement of colour and turbidity in process streams

- Measures turbidity and colour simultaneously.
- For use in raw sugar factories and refineries on products such as clarified juice, evaporator syrup, sugar melt to fine liquor.
- Local display of colour and turbidity plus one 4-20 mA output for each of the two measurements.
- Self calibrating with automatic calibration checks hourly with automatic compensation for cell fouling.
- Simple maintenance. Cleaning required once a week.
- Alarm for instrument malfunction.
- User programmable Alarms.
- Solid state light sources and sensors for extreme ruggedness

Manufactured by Sugar Instrumentation CC, South Africa

SPECIFICATIONS

The instrument was designed by the South African Sugar Milling Research Institute. It is a dual wavelength on line photometer which measures the absorbance of light by the sugar solution at 880 and 470 nanometers. The measurement at 880 nm is independent of colour whereas that at 470 nm is a function of colour and turbidity. These wavelengths are slightly different to those used in the ICUMSA method for colour and turbidity. The colour and turbidity values calculated by the instrument will not correlate well with ICUMSA values because of this wavelength difference, and also because brix is not measured and pH may differ from 7.0.

The zero is checked automatically by passing clean water through the measuring cell and updating the reference light level hourly. This also compensates for any cell fouling. The sensors are inherently linear over six decades so no further adjustment is required.

Electrical

Power requirements 24 V DC 140mA (300mA with valve operated)
Output Two x 4-20 mA Range 0 - 2 Abs. Max resistance 600 ohms.
Display Two line 16 character LCD display
Controls Two pushbuttons
Measurement range 0 - 2 Abs.
Resolution 0.01 Abs.
Isolation Instrument isolated from ground. 4-20 mA output common to zero volts.
Alarms Two pairs of floating contacts.(Instrument fail & measurement over set point)

Optical

Path length Adjustable - 20 mm., 40 mm or 60 mm.
Light source Light Emitting Diode
Wavelengths 880 nm. and 470 nm.

Mechanical

Dimensions 520mm wide X 430mm high X 240mm deep
Protection class IP 65
Air requirements : Instrument air at least 300kPa for actuator
Water requirements : Clean water. Approximately 20 litres per calibration
Pipe connections : Inputs 12.5 mm flexible hoses
Output Threaded ½" BSP (flexible hose optional)

CONTACT

Sugar Research International	Phone:	07 4952 7600
Box 5611		Intl +61 7 4952 7600
Mackay Mail Centre	Fax:	07 4952 7699
Queensland 4741		Intl +61 7 4952 7699
Australia	Email:	info@sri.org.au
	Website:	www.sri.org.au

Manufactured by Sugar Instrumentation CC, South Africa