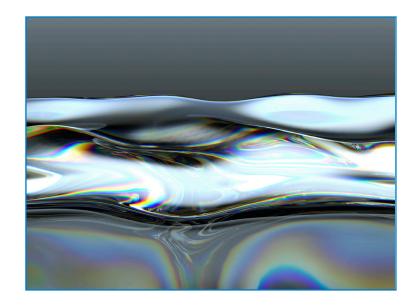
## APPLICATION

## KEY FEATURES

- In-line moisture measurement in real-time
- NIR spectral sensor integrated with measurement probe
- Suitable for continuous and discontinuous (batch) installations
- Contact measurement
- Hazardous area/ hygienic design certified
- LED lightsource guaranteeing an extended life span- no maintenance required
- Extremely low cost of operation

## Contamination detection in distilled products

In-line measurements are playing an important role in many industrial processes. Whether it is the color analysis of food products, the detection of crude oil in refined products during distillation, verification of color accuracy during paint production or the color measurement of materials in the chemical industry, the precise determination of color or the absence thereof, are routine requirements in many manufacturing processes.



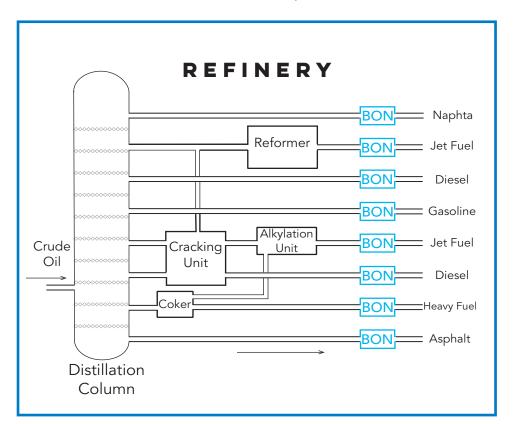
BON's color analyzers are grouped into three categories, the TRITON model, based on transmittance measurement technology for color analysis in liquids and the TELLUS model, using reflectance probes or flow cells for color in solids such as powders or surfaces. BOREAS for chemical analysis of gases.



## REAL TIME CONTAMINATION MEASUREMENT IN-LINE SOLUTION

Some refiners employ crude oil to cool and condense the crude tower overhead vapor stream. If a leak develops in this heat exchanger, crude oil can leak into the naphtha or light straight—run product. This could have a serious effect on catalyst in down-streaming processing units. A Color Analyzer installed on these streams can warn of leakage of crude oil into the light straight—run or naphtha streams. A similar application could be made on the crude / pump-around reflux or crude/product exchangers. A Color Analyzer could also be installed on the atmospheric gas oil stream to warn unit operators if residual material is being entrained into this stream. A similar application could be made on the gas oil stream from the vacuum tower.

TRITON Flow through Cell based Color Analyzers are ideal choice for measuring color in different scales at side streams for Light Naphtha with Boiling point at 80 to 185 deg F and a feed stock for Hydro treater to produce Gasoline to avoid detrimental equipment damage to Hydro-treaters. Similar application helps in Heavy Naphtha side stream at Boiling point 185 – 390 deg F feeding into Catalytic Reformer to produce Gasoline and Aromatics. Even Kerosene side streams can also install color analyzers with Boiling Point at 340 – 515 deg F as a feed stock to Hydrotreater to produce Jet Fuel and No.1 Diesel.



**PROTECTING THE CATALYST:** Side Stream samples are simply drawn into TRITON Flow through Cell for continuous analysis of Color with minimal sample intervention except for flow rate control if required. TRITON measurements are traceable to ASTM, APHA, Saybolt and other Reference Methods as necessary.

USA 260 Madison Ave., 8th Fl New York, NY 10016 +1-646-216-2157 Germany Anton-Huber-Str. 20 73430 Aalen +49-7361-63390-60

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