

# Well Testing

## Ancillary

### Gas Detection

Gas detection is a critical aspect of well testing operations, detection equipment for hazardous gases such as H<sub>2</sub>S, SO<sub>2</sub>, CO<sub>2</sub> and Oxygen form important analytical processes to protect personnel and equipment.

The most common gas detector currently used is a tube and hand pump combination, although automatic pump options are also available for sampling at selected rates and locations throughout the process system.

Tubes are glass vials filled with a chemical reagent that reacts to a specific chemical. A calibrated 100 ml sample of air is drawn through the tube with a bellows pump.

If the targeted chemical(s) is present the reagent in the tube changes colour and the length of the colour change typically indicates the measured concentration. Personal monitoring devices are worn by personnel and can quickly and precisely measure single-gas, dual-gas or multiple-gas content of up to seven gases simultaneously, including toxic, flammable gases and vapours, and oxygen.

Instrumentation also exists for area monitoring and can be used for the measurement of up to six gases at once. Key data can be transmitted from these units to local or global workstations.

Oxygen meters can be used for proving Nitrogen purity when blanketing vessels prior to high rate gas testing, preventing the risk of an explosive mixture being formed if the O<sub>2</sub> content is greater than 0.01%.

#### Applications

- Onshore and offshore well testing
- Production operations where hazardous gases are present
- Nitrogen blanketing of vessels
- Checking confined spaces prior to entry

#### Features and Benefits

- Single or multiple gas detection
- Lightweight, portable units
- Manual or automatic pumps
- Personnel monitoring devices, attached to PPE

