

CO2 GASCROMATOGRAPHIC SYSTEM



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CO2 GASCROMATOGRAPHIC SYSTEM

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capable of measuring gas concentrations over a wide range

- Multi component analysis
- Organic compounds
- ppb / ppm Levels of detection
- User friendly easy to use software

Quality control system for tankers for liquid CO2

Pentatec supplies a fully automatic system to manage the complete process of road-tanker loading under CO2 quality control which assures:

- the control of the automatic filling sequence for liquid CO2 in transportable tanks;
- the analysis of residual impurities in the road-tank to be filled;
- the analysis of the product loaded (in connection with the CO2 analysis system);
- The print out of delivery bill and quality certificate.

How the system works

When a road-tank arrives it is recognized by the driver badge. As soon as flexible hoses are connected, the analysis of the road-tank starts to avoid any product contamination. If everything is OK, the system fills the tank truck in a closed loop configuration. If not, the truck is filled in open loop mode. Once completed the filling, the system prints out the Liquid CO2 certificate of analysis and the Bill of Loading. The system can also be connected to the Factory truck weighing system.

Benefits:

- 24 hours loading
- No personnel required (any manual operation is done by the truck driver)
- Quality certificate
- Automation,
- Product traceability
- CO2 product batch analysis According to ISBT EIGA criteria
- Versatility





impurities in CO₂ – GC2010 General description



General Description

The Carbon Dioxide purity for beverage and food, shall be compliant with FOOD-GRADE and ISBT specifications.

Carbon dioxide production needs to be continuously checked for the determination of total purity and for a lot of individual impurities, like sulphur compounds, hydrocarbons, aromatic hydrocarbons, halogenated hydrocarbons, carbon monoxide and inert gases.

TPI-Pentatec analyser is designed to assure the highest accuracy and reliability with minimum cost to comply with the strictest CO₂ purity specifications.

TPI-Pentatec system can be combined with multiple sampling system.

CO₂ Gascromatographic analysis System

Technical features

Description:
GC based analytical system for pure Carbon Dioxide

- Detectors:**
- Flame Photometric Detector
 - Thermal Conductivity Detector
 - Flame Ionisation Detector
 - Discharge Ionisation Detector

Performances:

Analyses and detection limit:

Sulphur compounds	20	ppb	(part per billion)
Permanent gases	1	ppm	(part per million)
Carbon monoxide	1	ppm	(part per million)
Hydrocarbons	20	ppb	(part per billion)
BTX	20	ppb	(part per billion)
CFC	100	ppb	(part per billion)



Utilities and supplies

Gas supply (chromatography grade)

- Helium 5.0 (>99.999%) - supply pressure 6 bar
- Hydrogen 5.0 (>99.999%) - supply pressure 2 bar
- Air 5.0 (zero grade) - supply pressure 6 bar
- Instrument air or CO₂ - 3-5 bar dew point -40°C

Power supply about 3 KW – 230V 50Hz

Options

- Sampling and auxiliary gas control
- Multiple sampling system
- Automatic loading/unloading truck system under CO₂ quality control

High purity CO₂
quality control

efficiency
reliability
versatility

Front view

Dimensions:
60 cm high,
85 cm wide,
60 cm deep

Approximate weight:
50 Kg;
personal computer excluded

WEIGHT AND DIMENTIONS

