

PROCESS AND DEVICE FOR ANALYZING TRACES OF IMPURITIES
IN A GAS SAMPLE BY MEANS OF A DIODE LASER

ABSTRACT

The invention relates to a process for analyzing traces of at least one impurity in a gas sample, by absorption by the impurity to be detected of a light beam emitted by a semiconductor diode laser, the beam emitted by the diode being split into at least two branched beams, one called the measurement beam which passes through the gas sample to be analyzed in a multipassage cell before being focused onto a measurement photodetector, another branched beam, called the reference beam, being along a reference path and directly focused onto a reference photodetector without encountering the gas sample, in which process the gas sample is at a pressure at least equal to atmospheric pressure, and a modulation of the supply current of the diode has been introduced, which comprises at least one function of the exponential type.

Fig. 1