

A rapid high performance ethanol analysis based on the direct reaction with the enzyme Alcohol Oxidase. Applications include brewing, flavourings, pharmaceuticals, bioprocesses, toiletries, etc.

Bulletin Reference	TB – Ethanol – Industrial – GMRD-110(I) – V.01
Order Code(s)	GMRD-110(I), GMRD-110(IJ), GMRD-112
Reagent Kit Size(s)	50 ml (70 analyzer cycles), 8 x 50 ml (560 analyzer cycles), 4 x 175 ml (1000 analyzer cycles) 50 ml (30 analyzer cycles), 8 x 50 ml (240 analyzer cycles), 4 x 175 ml (420 analyzer cycles) for AM2
Instruments	All AM2, AM3, GL6 and GM8 Series analyzers
Samples	Aqueous samples including alcoholic beverages and other alcohol containing products e.g. cough mixtures, shampoos
Sample Volume	5 µl
Analysis Time	20 - 25 seconds
Working Range	0.1 - 10 %V/V; 0.2 - 40 %V/V (AM2)
Reagent Stability	Shelf-life unopened: 6 months stored at 0 - 5°C. Shelf-life reconstituted: AOD/buffer reagent, ca. 5 days stored at 0 - 5°C.
Note(s)	Alcohol oxidase is non-specific towards ethanol. This assay will also detect other low molecular weight alcohols, e.g. methanol. A range of calibrating standards is available separately, as required. Beer comparison vs Reference Distillation (range 2 - 11 %V/V): $y$ (Analox) = 1.006x + 0.005 %V/V, $r = 0.9998$

## Principle

In the presence of molecular oxygen, ethanol is oxidised by the enzyme alcohol oxidase (AOD) to acetaldehyde and hydrogen peroxide,



Under the conditions of the assay, the rate of oxygen consumption is directly proportional to ethanol concentration.