

GLYCEROL (GLY)

Colorimetric Method for Wine Analysis
RX ALTONA

FOR FULL PRODUCT DETAILS, PLEASE REFER TO THE KIT INSERT.

INTENDED USE

For the quantitative analysis of Glycerol in wine. This product is suitable for manual use and on the Rx Altona analyser.

Cat. No.

GY 105	RIa. Buffer	2 x 100 ml
	RIb. Reagent	6 x 15 ml
	CAL. Standard	1 x 5.5 ml

SIGNIFICANCE

Glycerol is formed as a by-product of fermentation. It also has a favourable impact on wine quality, as it improves fullness and sweetness.

SAMPLE

Red, white and rosé wine. Turbid samples should be filtered prior to assay.

Samples with glycerol concentration < 0.3 g/L can be run neat. If samples have a glycerol concentration > 0.3 g/L they should be pre-diluted with deionised water prior to assay.

Dilution Table

Estimated concentration of glycerol (g/L)	Dilution with water	Dilution Factor (F)
< 0.300	No dilution required	1
0.300 - 3.0	1 + 9	10
3.0 - 30	1 + 99	100
> 30	1 + 999	1000

Samples which require dilution must be multiplied by their dilution factor following measurement to obtain actual glycerol concentration.

SAFETY PRECAUTIONS AND WARNINGS

For the analysis of food and wine. Not for use in diagnostic procedures. Do not pipette by mouth. Exercise the normal precautions required for handling laboratory reagents.

Solution RIa contains Sodium Azide. Avoid ingestion or contact with skin or mucous membranes. In case of skin contact, flush affected area with copious amounts of water. In case of contact with eyes or if ingested, seek immediate medical attention.

Sodium Azide reacts with lead and copper plumbing, to form potentially explosive azides. When disposing of such reagents flush with large volumes of water to prevent azide build up. Exposed metal surfaces should be cleaned with 10% sodium hydroxide.

Please dispose of all biological and chemical materials according to local guidelines.

Health and Safety Data Sheets are available on request.

The reagents must be used only for the purpose intended by suitably qualified laboratory personnel, under appropriate laboratory conditions.

STABILITY AND PREPARATION OF REAGENTS

RIa. Buffer

Contents ready for use. Stable up to the expiry date when stored at +2 to +8°C.

RIb. Reagent

Reconstitute one vial of Reagent RIb with 15 ml of Buffer RIa. Stable for 14 days when stored at +2 to +8°C, or 3 days at +15 to +25°C protected from light.

CAL. Standard

Contents ready for use. Stable up to the expiry date when stored at +2 to +8°C.

MATERIALS PROVIDED

Buffer
Reagent
CAL

MATERIALS REQUIRED BUT NOT PROVIDED

Glycerol
Double deionised water

PROCEDURE

Select Glycerol in the Test screen. Then select Run Calibration or Run Sample and carry out a water blank as instructed.

Pipette into a cuvette:

	S0 Blank	S0	S1 Blank	S1	Sample Blank	Sample
ddH ₂ O	15µl	15µl	---	---	---	---
CAL Standard	---	---	15µl	15µl	---	---
Sample	---	---	---	---	15µl	15µl
Buffer (RIa)	500µl	---	500µl	---	500µl	---
Reagent (RIb)	---	500µl	---	500µl	---	500µl

Mix and incubate for 5 minutes at +37°C or for 10 minutes at +20 to +25°C. Insert the cuvette into the RX **altona** flowcell holder and press read.

CALIBRATION

Prepare a calibrator using glycerol to a concentration of 150mg/L. For recommended calibration use the prepared solution Calibrator Neat (as S1) and ddH₂O (as S0). A 2 point calibration is recommended with change in reagent lot or as indicated by quality control procedures.

SPECIFIC PERFORMANCE CHARACTERISTICS

The following performance characteristics were obtained using an Rx Altona analyser in cuvette mode running at a temperature of +37°C.

LINEARITY

This test is linear up to a glycerol concentration of 300 mg/L. Samples above this concentration should be diluted as described in the dilution table.

SENSITIVITY

The minimum detectable concentration of Glycerol was determined as 7.2 mg/L.

PRECISION

Within run precision

	Level 1	Level 2	Level 3
Mean mg/l	47.5	97.9	198.4
SD	0.957	1.929	3.106
CV (%)	2.01	1.97	1.57
n	20	20	20

Between run precision

	Level 1	Level 2	Level 3
Mean mg/l	48.6	99.0	204.1
SD	1.185	1.535	5.129
CV (%)	2.44	1.55	2.51
n	20	20	20

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