

## POTASSIUM (K)

Enzymatic UV – Method

RX ALTONA

WINE AND FRUIT JUICE ONLY

FOR FULL PRODUCT DETAILS, PLEASE REFER TO KIT INSERT.

### INTENDED USE

For the quantitative analysis of Potassium in wine and fruit juice. This product is suitable for use on the RX **altona** analyser.

FOR THE ANALYSIS OF FOOD AND WINE. Not for use in diagnostic procedures.

### Cat. No.

PT 3852	R1a.	Buffer	3 x 20 ml
	R1b.	Enzyme/Substrate	3 x 20 ml
	R2a.	Diluent	3 x 9 ml
	R2b.	Enzyme	3 x 9 ml

### SAMPLE

Red wine, white wine and fruit juices. Turbid samples should be filtered prior to assay. Strongly coloured samples with suspected high values should be decolourised with 0.1g polyamide powder, gelatine or polyvinylpyrrolidone (PVPP) to approximately 10 ml of juice or wine. Stir for 1 minute and filter. The clear filtrate can then be used in the assay undiluted.

Samples with potassium concentration <0.450 g/l can be run neat. If potassium concentration is >0.450 g/l, samples should be pre-diluted with deionised water prior to assay.

### Dilution Table

Estimated concentration of potassium (g/L)	Dilution with water	Dilution Factor (F)
<0.450	No dilution required	1
0.450-2.250	1 + 4	5
2.250-4.500	1 + 9	10

### STABILITY AND PREPARATION OF REAGENTS

#### R1 Buffer/Enzyme/Substrate

Dissolve the contents of 1 vial of Enzyme/Substrate R1b in a portion of Buffer R1a; then transfer the entire contents to Buffer R1a, rinsing vial R1b several times. Stable for 7 days at +2 to +8°C.

#### R2 Enzyme/Diluent

Dissolve 1 vial Enzyme R2b in a portion of Diluent R2a; then transfer the entire contents to Diluent R2a, rinsing vial R2b several times. Stable for 2 weeks at +2 to +8°C.

### MATERIALS PROVIDED

Buffer/Enzyme/Substrate

Enzyme/Diluent

### MATERIALS REQUIRED BUT NOT PROVIDED

Potassium chloride

DDIH<sub>2</sub>O

### PROCEDURE

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

Pipette into cuvette:

	S0	S1	Sample
Sample	---	---	15 µl
K CAL (diluted 1:1)	15 µl	---	---
K CAL (neat)	---	15 µl	---
R1	500 µl	500 µl	500 µl

Mix and incubate for 5 minutes at +37°C. Then add:

R2	200 µl	200 µl	200 µl
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Mix well, insert the cuvette into the Rx **altona** flowcell holder and press Read.

### CALIBRATION

Prepare the following to use as calibrator. Weigh out exactly 0.3814g potassium chloride into 1L ddIH<sub>2</sub>O. For recommended calibration use the above solution Calibrator Neat (as S1, conc. 0.2 g/l) and dilute 1 + 1 (as S0, conc. 0.1 g/l) with double distilled. 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** in cuvette mode running at +37°C.

### LINEARITY

This method is linear to potassium concentrations of 0.450g/l.

**SENSITIVITY**

The minimum detectable concentration of Potassium with an acceptable level of precision was determined as 0.08g/l.

**PRECISION****Intra assay precision**

	Level 1	Level 2	Level 3
Mean (g/l)	0.096	0.304	0.403
S.D.	0.002	0.010	0.013
C.V. (%)	2.35	3.34	3.15
n	20	20	20

**Inter assay precision**

	Level 1	Level 2	Level 3
Mean (g/l)	0.102	0.267	0.374
S.D.	0.006	0.009	0.014
C.V. (%)	6.17	3.35	3.71
n	20	20	20

29 Sep 16 ml