ChloralMicroplate Assay Kit

User Manual

Catalog # CAK1252

(Version 1.3A)

Detection and Quantification ofChloralContentin Water and Other biological fluidsSamples.

For research use only. Not for diagnostic or therapeutic procedures.

I. INTRODUCTION

Chloral, also known as trichloroacetaldehyde or trichloroethanal, is the organic compound with the formula Cl_3CCHO. This aldehyde is a colourless oily liquid that is soluble in a wide range of solvents. It reacts with water to form chloral hydrate, a once widely used sedative and hypnotic substance.

Chloral Microplate Assay Kit provides a convenient tool for sensitive detection of Chloralconcentration in a variety of samples. The intensity of the product color, measured at 480 nm, is proportional to the Chloral concentration in the sample.

II.KIT COMPONENTS

Component	Volume	Storage
96-Well Microplate	1 plate	
Reaction Buffer	5 ml x 1	4 °C
Dye Reagent	Powderx 1	4 °C
Dye Reagent Diluent	5 ml x 1	4 °C
Standard	Powderx 1	4 °C
Plate Adhesive Strips	3 Strips	
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Note:

Dye Reagent:add 5 ml Dye Reagent Diluent, mix before use.

Standard: add 1 ml distilled water to dissolve before use; then add 50µl into 950µl distilled water, mix, the concentration will be 1 mmol/L.

III. MATERIALS REQUIRED BUT NOT PROVIDED

1. Microplate reader to read absorbance at 480 nm
2. Distilled water
3. Pipettor, multi-channel pipettor
4. Pipette tips
5. Centrifuge
6. Timer
7. Convection oven

IV. SAMPLE PREPARATION

1. For liquid samples

Detect directly, or dilute with distilled water.

V. ASSAY PROCEDURE

Add following reagents intothe microplate:

Reagent	Sample	Standard	Blank
Sample	100µl	--	--
Standard	--	100µl	--
Distilled water	--	--	100µl
Reaction Buffer	50 µl	50 µl	50 µl
Dye Reagent	50 µl	50 µl	50 µl
Mix, cover the plate adhesive strip, incubate at90°C for 15minutes, recordabsorbance measured at 480 nm.			

Note:

1) Perform 2-fold serial dilutions of the top standards to make the standard curve.

2) The concentrations can vary over a wide range depending on the different samples. For unknown samples, we recommend doing a pilot experiment & testing several doses to ensure the readings are within the standard curve range.

3) Reagents must be added step by step, can not be mixed and added together.

VI. CALCULATION

1. According to the volume of sample

$$\text{Chloral (μmol/ml)} = (C_{Standard} \times V_{Standard}) \times (OD_{Sample} - OD_{Blank}) / (OD_{Standard} - OD_{Blank}) / V_{Sample}$$

$$= (OD_{Sample} - OD_{Blank}) / (OD_{Standard} - OD_{Blank})$$

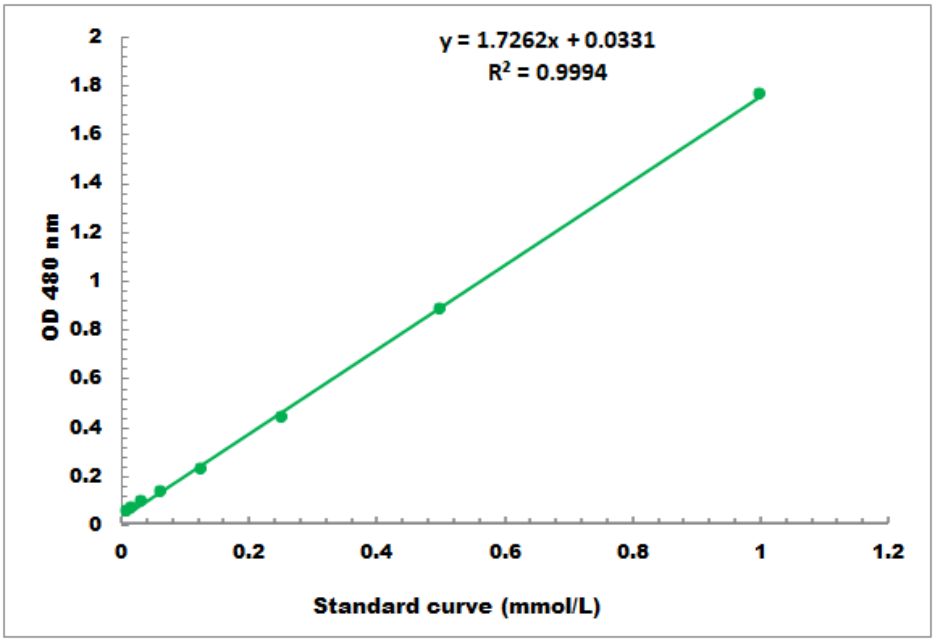
$C_{Standard}$: the concentration of standard, 1 mmol/L = 1μmol/ml;

$V_{Standard}$: the volume of standard, 0.1 ml;

V_{Sample}: the volume of sample, 0.1 ml.

VII. TYPICAL DATA

The standard curve is for demonstration only. A standard curve must be run with each assay.



Detection Range: 0.01 mmol/L - 1 mmol/L

VIII. TECHNICAL SUPPORT

For troubleshooting, information or assistance, please go online towww.cohesionbio.com or contact us at techsupport@cohesionbio.com

IX. NOTES