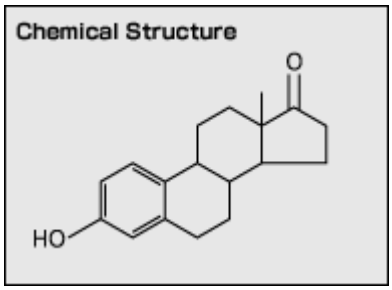
E1 ELISA Kit

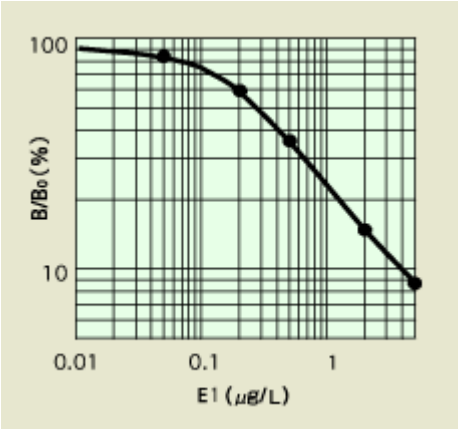
- E1 monoclonal antibody binds exclusively with E1 and does not show cross-reaction with other chemicals with similar structures.
- The quantitative analysis ranges from 0.05µg/L- 5µg/L(ppb), sensitive enough to detect E1 in a specimen from river or waste water, etc.
- With ease of handling, the total time for measurement is only 2.5 hours.
- The ELISA measurement is highly reproducible; the coefficient of variation (CV) is generally under 10%.
- The kit, a 96-well microplate format, enables simultaneous measurement of multiple samples at more reasonable cost.

Estrone

Estrone (E1) is found more abundantly in river or sewage water than 17β-Estradiol (E2), thus requiring cautious monitoring, although estrogenicity of E1 is reported to be weaker than that of E2 in the vitellogenin synthesis test in rainbow trout.

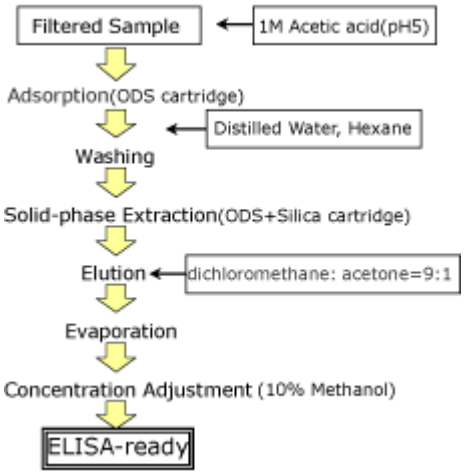


E1 Standard Curve



Samples containing Estrone(E1) within the dynamic range (0.05 µg/L- 5 µg/L) can be directly applied to assay after filtration. Samples with Estrone content below the range must be concentrated with solid phase extraction prior to the ensuing session. Coefficient of variation(CV) is generally under 10% throughout the dynamic range.

Pretreatment (Simplified Solid Phase Extraction)



1)Adjust the pH of the sample to 5.0 with 1M Acetic acid.

2)Pour sample liquid through a C18 solid-phase cartridge

3)Wash the cartridge with distilled water and Hexane.

4)Couple a silica cartridge to the C18 cartridge and elute E1 with a mixture of dichloromethane : acetone=9:1.

5)Dry the sample with nitrogen gas, then adjust MeOH concentration at 10% for measurement.

- The specific procedure may vary in sample quality.

Cross-reactivity Pattern

Compounds	Cross reactivity(%)
Estrone(E1)	100
2-methoxy E1	0.2
17β-Estradiol(E2)	0.3
16-keto-E2	0.2
E2-17-glucuronide	<0.1
E2-3-glucuronide	<0.1
E2-3-sulfate-17-glucuronide	<0.1
Estriol(E3)	<0.1
16-epi-E3	<0.1
E3-16-glucuronide	<0.1
Ethynylestradiol (EE2)	<0.1

Kit Format

Kit Format		Comment
Microplate	1 plate (96 wells) & reagents	Needs a microplate reader(450nm) For multiple and simultaneous measurement