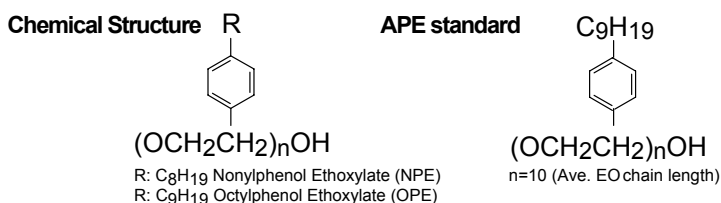


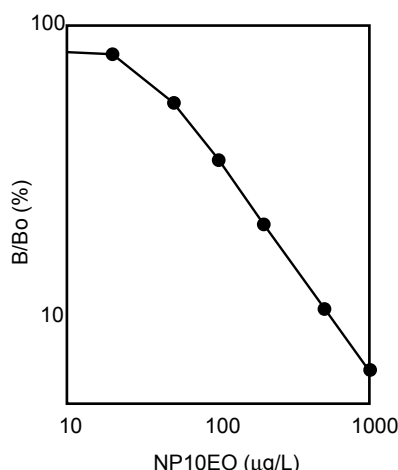
## Alkylphenol Ethoxylate (APE) ELISA kit

The nonionic surface active agents **Alkylphenol ethoxylates (APEs)** are widely used detergents in domestic and industrial products. APEs are persistent against biodegradation and the toxicity increases in the course of degradation. There is concern that APEs and their metabolites have an endocrine disrupting effect on humans and wildlife.



**The Alkylphenol Ethoxylate (APE) ELISA kit\*** specifically detects APEs regardless of ethylene oxide (EO) chain length (n=1-22) and does not cross-react with other surfactants or compounds of similar structure. Currently used measuring methods, such as HPLC, GC/MS, or LC/MS, require expensive instrumentation as well as time consuming extraction and concentration with harmful solvent. This test kit detects APE in water with high sensitivity.

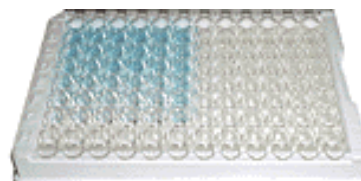
**The analysis** is based on a competitive reaction where enzyme-labelled standard APE competes with free APE in the sample for binding to a specific monoclonal antibody immobilised to the surface of the microtiter plate or tube. The amount of labelled APE bound to the plate is determined by addition of a non-coloured substrate which is converted into a coloured product. The colour intensity is measured at 450 nm and is inversely proportional to the amount of APE in the sample. The assay is calibrated using a standard solution of APE supplied with the kit.



**The Alkylphenol Ethoxylate (APE) ELISA kit** is suitable for applications such as analyses of waste and river water, textiles, detergent formulas and optimization of washing processes.

**The assay is highly sensitive, simple and rapid to perform.** The standard curve working range is 20-1000 µg/L. A simple solid phase extraction protocol is available for samples with very low concentrations of APE.

**The kit is available in a microplate (96 wells) format.**



\*) *The Alkylphenol Ethoxylate (APE) ELISA kit is licensed from Tokiwa Chemical Industries Co., Ltd.*

非イオン界面活性剤 APE ELISA KIT



**Cross-reactivity pattern**

<i>Compound</i>	<i>Reactivity (%)</i>
<b>Nonionic surfactants</b>	
NPE (Nonylphenol ethoxylate)	
<b>NP10EO (average EO chain length = 10)</b>	<b>100</b>
NP7.5EO (average EO chain length = 7.5)	107
NP5EO (average EO chain length = 5)	136
NP2EO (average EO chain length = 2)	87
NP2EC (average EO chain length = 2, -COOH)	128
NP0EO (Nonylphenol)	7
OPE (Octylphenol ethoxylate)	
OP10EO (average EO chain length = 10)	125
AE (Alkyl ethoxylate)	<0.1
<b>Anionic surfactants</b>	
LAS (Linear alkylbenzene sulfonate)	<0.2
SOAP (Sodium laurate)	<0.2
SDS (Sodium dodecyl sulfate)	<0.2
AES (Alkylether sulfate)	<0.2
<b>Others</b>	
Phenol	<0.2
PEG (Polyethylene glycol)	<0.2

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