

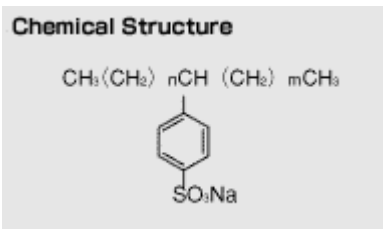


### LAS ELISA Kit

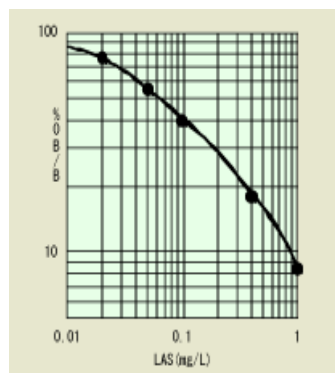
- The monoclonal antibody binds exclusively with LAS and does not cross-react with other surfactants or compounds of similar structure.
- The detection range is between 0.02mg/L and 1mg/L, sensitive enough to render harmful solvent extraction and concentration unnecessary.
- A simple filtration through glass filter is the only pretreatment before measurement.
- With ease of handling, the total time for measurement is only 2.5 hours.
- The kit, a 96-well microplate format, enables simultaneous measurement of multiple samples at more reasonable cost.

### LAS

LAS is an abbreviation for **L**inear **A**lkybenzene **S**ulfonate, the most widely used synthetic detergent and the major component among methylene blue active substances (MBAS). LAS has been pointed out to generate fish toxicity through bioaccumulation.



### LAS Standard Curve

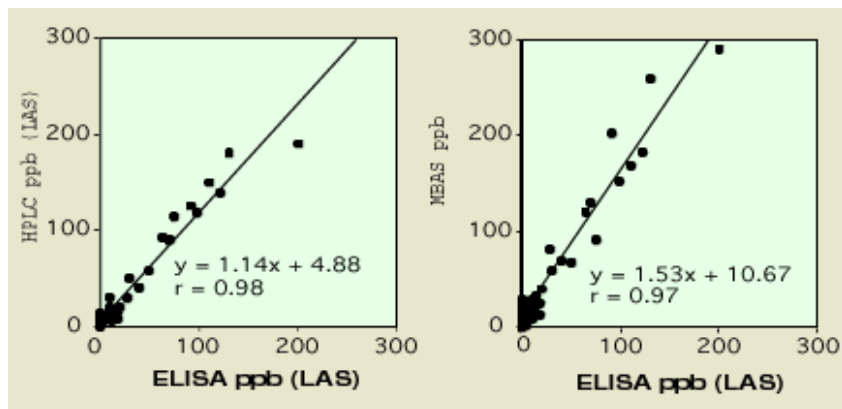


The sample containing LAS within the dynamic range (0.02mg/L-1mg/L) can be directly applied to assay after filtration.

Coefficient of variation (CV) is generally under 10% throughout the dynamic range.

- A concentration is necessary for a sample with LAS content below the range for quantification.

## Comparison with Conventional Methods



ELISA exhibits high correlation with MBAS and HPLC. The value from ELISA is almost equivalent to that of HPLC, which measures only LAS, and is smaller than that of MBAS detecting other anionic surfactants as well.

## Cross-Reactivity Pattern

Compound	% reactivity
<b>Anionic surfactants</b>	
Linear alkylbenzene sulfonates(LAS)	
C12	100
C11	87
C10	101
C9	114
C8	75
Sodium dodecyl sulfate(SDS)	1.0
Sodium myristate	0.3
Sodium laurate	0.1
Sodium palmitate	<0.1
Sodium stearate	<0.1
<b>Nonionic surfactants</b>	
Nonylphenol ethoxylate(EO=10)	<0.1
Polyoxyethylene(EO=20) sorbitan monolaurate	<0.1
Disodium lauryl surfosuccinate	<0.1
Benzenesulfonic acid	<0.1
Phenol	<0.1
Toluene	<0.1
Xylene	<0.1

The monoclonal antibody has a high specificity to LAS with various alkyl chain length (n=8-12) and doesn't cross-react with other surfactants or compounds of similar structure.

## Kit Format

	Kit Format	Comment
Microplate	1 plate (96 wells)	Needs a microplate reader(450nm)
	& reagents	For multiple and simultaneous measurement
Tube	20 tubes	Needs 1 mL cuvette and a spectrophotometer(450nm)
	& reagents	For limited number of samples

