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Sanyo Chemical Industries, Ltd

Development of detergent base excellent in detergency and biodegradability

For liquid laundry detergent against sebum stain

Sanyo Chemical Industries, Ltd. (Head office; Higashiyama-ku, Kyoto City; President: Takao Ando) has developed liquid laundry detergent base EMULMIN CS-100 that excels in detergency against sebum stain and biodegradability. EMULMIN CS-100 is a nonionic surfactant of natural higher alcohol based poly (ethylene oxide/ propylene oxide) random copolymer type.

【Abstract of the new technology】

The main types of laundry detergent are powders and liquids. Currently, the liquid detergents become common. General laundry detergents contain nonionic surfactants excels in detergency against especially sebum stain, and anionic surfactants which is useful to remove inorganic and protein stain.

As the nonionic surfactants, such as ethylene oxide adducts of higher alcohols excellent in biodegradability and environment friendly are used. In order to accommodate diverse needs for the laundry such as saving water or shortening washing time, etc., higher detergency is required.

However, it is difficult to satisfy both detergency and biodegradability. When detergency is improved by increasing lipophilicity of the surfactant, its trade-off property of biodegradability becomes worse.

We optimized a molecular geometry by taking advantage of our long experienced surfactant design technologies (patented). This enabled EMULMIN CS-100 to improve detergency significantly without substantially worsening the excellent biodegradability of the nonionic surfactants. EMULMIN CS-100 has great detergency at even lower concentration compared to the conventional nonionic surfactants. Therefore EMULMIN CS-100 provides the flexibility of composition blending for the laundry detergents to customize according to every customer's needs by reducing the concentration thereof and adding other useful components.

【Future plans】

It is expected to require higher performance surfactants over diversifying of the needs, such as further water saving, miniaturization of the containers and shortening the washing time, etc. We will continue to develop the higher performance of detergent bases, and satisfy individual needs by taking advantage of our specification technologies of AOA (alkylene oxide adducts).