

## **LiquaPar Oil**

LiquaPar Oil is a unique combination of three paraben esters, which have been shown to be effective against Gram-positive bacteria, yeast and mold. The higher alkyl esters present in LiquaPar Oil have greater antimicrobial activity than lower weight analogs.

This combination gives LiquaPar Oil increased effectiveness versus other parabens.

LiquaPar Oil demonstrates antimicrobial activity from concentrations of 390 ppm. The specific MIC values listed in the table below show the expected variation among microbial species. The MIC test is a preliminary evaluation to assess antimicrobial activity. In this test, a serial dilution of the antimicrobial is made in a liquid growth support media. The growth support media is inoculated and bacterial recovery is measured after 24 hours at 35°C and fungal recovery is measured after 5 days at 25°C.

Effective Antimicrobial Activity  
Approved Worldwide  
Convenient Solvent Free Liquid  
Compatible with Parsol 1789  
Variety of Applications

Unlike other liquid paraben systems, the parabens in LiquaPar Oil are 100% active in their liquid form without the presence of solvents.

### **Approved Worldwide**

LiquaPar Oil is permitted for use as a personal care preservative in the three major markets of the world, the United States, European Union (EU), and Japan. This worldwide acceptance allows finished goods to be marketed on a global basis.

In the European Union parabens are permanently listed for use without restriction up to a total paraben content of 0.8%. In Japan, LiquaPar Oil is permitted up to a maximum total paraben concentration of 1.0%. In the Americas, LiquaPar Oil is allowed for cosmetic use and included in The Cosmetic, Toiletry, and Fragrance Association (CTFA) International Cosmetic Ingredient Dictionary under the name Isopropylparaben (and) Isobutylparaben (and) Butylparaben.

### **Convenient Solvent Free Liquid**

LiquaPar Oil is a 100% active clear, liquid paraben mixture that remains liquid under all conditions of use without the presence of solvents. It eliminates the problems of grit and crystallization and permits formulations and formulating techniques that are impossible with traditional powder preservatives

LiquaPar Oil is easily incorporated into many types of cosmetic formulations without heating. Formulating with a solvent-free, stable liquid paraben system reduces processing and manufacturing costs associated with powder parabens. LiquaPar Oil also has superior hydrolytic stability compared to other parabens, allowing for a wide use range, greater processing flexibility and increased product shelf-life.

### **Compatible with Parsol 1789**

LiquaPar Oil is compatible with virtually all cosmetic ingredients, including Parsol 1789, avobenzone, the widely used UVA sunscreen. Many preservatives can

adversely affect the UV absorption characteristics of this material, however, LiquaPar Oil will not interfere with the performance characteristics of Parsol 1789 based formulations.

#### Variety of Applications

LiquaPar Oil is an active blend of parabens, useful in a wide range of cosmetic formulations. It is ideal for anhydrous systems and emulsions. LiquaPar Oil is recommended for use in:

creams, lotions, ointments, exfoliants  
lipsticks, liquid and cream make-up, eyeliner,  
pressed and loose powders, mascara;  
conditioners.

LiquaPar Oil contributes to the preservation of most products when used at recommended levels of 0.4% - 0.8%. Parabens are primarily fungicides, but have good activity against Gram-positive organisms. For formulations that may require more protection, LiquaPar Oil may be combined with other Sutton Laboratories preservatives to further increase microbial activity.