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| <b>Product Name:</b>        | Fosfomycin Tromethamine                                                                                                                                                                                                                                                                                        |
| <b>Product Number:</b>      | F043                                                                                                                                                                                                                                                                                                           |
| <b>CAS Number:</b>          | 78964-85-9                                                                                                                                                                                                                                                                                                     |
| <b>Molecular Formula:</b>   | $C_7H_{18}NO_7P$                                                                                                                                                                                                                                                                                               |
| <b>Molecular Weight:</b>    | 259.19 g/mol                                                                                                                                                                                                                                                                                                   |
| <b>Form:</b>                | Powder                                                                                                                                                                                                                                                                                                         |
| <b>Appearance:</b>          | White or almost white powder                                                                                                                                                                                                                                                                                   |
| <b>Solubility:</b>          | Water (5g/100 ml)                                                                                                                                                                                                                                                                                              |
| <b>Source:</b>              | <i>Streptomyces fradiae</i>                                                                                                                                                                                                                                                                                    |
| <b>Storage Conditions:</b>  | 2-8°C, airtight, protect from light                                                                                                                                                                                                                                                                            |
| <b>Description:</b>         | Fosfomycin tromethamine is a broad-spectrum organophosphonate antibiotic with <i>in vitro</i> activity against most urinary tract pathogens. It is active against <i>E. coli</i> , <i>Citrobacter</i> , <i>Enterobacter</i> , <i>Klebsiella</i> , <i>Serratia</i> and <i>Enterococcus</i> .                    |
| <b>Mechanism of Action:</b> | Fosfomycin tromethamine inhibits bacterial cell (peptidoglycan) synthesis. Specifically, it inhibits uridine diphospho-N-acetyl-D-glucosamine enolpyruvyl transferase (MurA), thereby blocking the condensation of uridine diphosphate-N-acetylglucosamine, one of the first steps in peptidoglycan synthesis. |
| <b>Spectrum:</b>            | Broad spectrum against both Gram-positive and Gram-negative pathogens                                                                                                                                                                                                                                          |

## References:

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