

## RP-HPLC METHOD DEVELOPMENT AND VALIDATION

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### ABSTRACT

*Pharmacia and Upjohn Company was developed a Linezolid – a first synthetic oxazolidinones drugs in 1990s. First approved for use in 2000, linezolid was the first commercially available 1, 3-oxazolidinone antibiotic. Linezolid is quite expensive; a course of treatment may cost one or two thousand U.S. dollars for the drug alone, not to mention other costs. Linezolid is member of oxazolidinones class of drugs, is active against Gram-positive bacteria that cause disease, including streptococci, vancomycin-resistant enterococci (VRE), and methicillin-resistant Staphylococcus aureus (MRSA). Linezolid is used in infections of the skin and soft tissues and pneumonia although off-label use for a variety of other infections is becoming popular. Linezolid is protein synthesis inhibitor it stops the growth of bacteria by disrupting their production of proteins. Bacterial resistance to linezolid has remained very low since it was first detected in 1999, although it may be increasing. It can be used in patients of all ages and in people with liver disease or poor kidney function. Linezolid is more effective than glycopeptide antibiotics (such as vancomycin) and beta-lactam antibiotics in the treatment of skin and soft tissue infections (SSTIs) caused by Gram-positive bacteria. Linezolid appears to be cheaper and more effective than vancomycin in the treatment of diabetic foot infections.*