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### Extractive Spectrophotometric Estimation of Sitagliptin Phosphate

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**Abstract:** Two simple, accurate, sensitive and reproducible Ion-Pair Spectrophotometric methods (A & B) have been developed for the determination of Sitagliptin Phosphate (SGP) in bulk drugs and also in tablets and spiked human urine. The proposed methods are based on complexation of the drug with Patent blue vf (Method 1) & Methyl Orange (Method 2), extracted with chloroform, showing absorbance maxima at **633 nm** and **415 nm** respectively. Beer's law is obeyed over a concentration range of 30-120  $\mu\text{g/ml}$  and 20-80  $\mu\text{g/ml}$  for Method 1 and 2 respectively. Results of analysis for the two methods established were validated statistically and also by ICH guide lines. All the variables were studied to optimize the reaction conditions. No interference was observed in the presence of common pharmaceutical excipients. The validity of the methods was tested by analyzing the drug in its pharmaceutical preparations. Good recoveries were obtained.

**Keywords:** ion-pair color complex, SGP, MO, Patent blue vf & Molar Absorptivity.

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