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Validated Static Headspace Gas Chromatographic Method for Determination of Formic Acid in Pharmaceutical Excipients

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Abstract:A static headspace gas chromatographic method (SHS-GC) was developed and validated for determination of formic acid after derivatizing it to ethyl formate using acidified ethanol. The developed method was simple and specific. It has acceptable accuracy and precision. The limits of detection and quantitation of formic acid were 127.15 and 385.29 $\mu\text{g/L}$, respectively. This method was successfully used to determine formic acid impurity in pharmaceutical excipients.

Keywords:Formic acid, Pharmaceutical excipients, Chemical derivatization, Static headspace, Gas chromatography.

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