

## Curcumin Quantification in Dosage Forms using High Performance Liquid Chromatography\*

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### ABSTRACT

Curcumin quantification in dosage forms using high performance liquid chromatography (HPLC) has been carried out. This experiment was aimed to determine analysis conditions to be applied in curcumin dosage form analysis using HPLC. The experiment has been done with the following steps: mobile phase preparation, instrument preparation, working solution preparation followed by precision assay, accuracy assay, standard curve estimation, and sample measurement. The chosen condition was HPLC, LC-10AT, Shimadzu; column Shimadzu C<sub>18</sub>, VP-ODS, 150L 4.6; acetonitrile-2% acetic acid (45:55) as mobile phase; acetonitrile as solvent; detection at 420 nm; flow rate 1.2 mL/min. The result showed a correlation coefficient value was 0.9999, recovery value for accuracy assessment was 99.50%, variation coefficient for precision was 1.33%, limit of detection was 0.7816 ppm, and limit of quantification was 2.6053 ppm. Thus, the analytical method using HPLC for curcumin were feasible for curcumin quantification in dosage forms. This method has been applied for measuring three curcumin dosage forms A, B, C, and one curcumin raw material D. Samples A, B, C, and D measurement gave 105.86, 87.12, 10.71, and 130.35%, respectively.