



## Validated determination of hyaluronic acid by UPLC-UV for pharmaceutical products

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Hyaluronic acid (HA) is a well-known active for medical, pharmaceutical and cosmetic products. An improved and fast analysis using UPLC was validated. The analytical condition was optimized with phosphate buffer (0.05 M, pH 7) as an isocratic mobile phase flows at 0.4 mL/min for 1.5 min at an injection volume of 10  $\mu$ L with BEH C18 column, 1.7  $\mu$ m, 2.1  $\times$  100 mm. A good linearity ( $r^2 > 0.999$ ) within the established concentration range (0.1 – 1.2 mg/mL) and LOD and LOQ of 6 and 19 ng/mL were revealed with a good recovery rate of 97.25 – 100.48%, accuracy (RSD < 2%) and precision (RSD < 5%). The results are exhibited to be validated delineated by AOAC, ICH and USFDA criteria. This developed method is therefore a suitable quality control and stability test of HA products and feasible for the industrial practice.

**Keywords:** Hyaluronic acid, UPLC, validation, pharmaceutical products, industrial practice