



Determination of Sodium Citrate and Potassium Citrate Chewable Tablet's Content and Dissolution by Ion Chromatography

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SUMMARY. The aim of the present study was to determinate the content and the dissolution of potassium citrate and sodium citrate chewable tablets. Therefore, an ion chromatography (IC) method was established by using an external standard method on an ion Pac CS12A cationic exchange chromatographic column with an ion Pac CG12A guard column. The eluent was a 20 mmol/L methanesulfonic acid aqueous solution with a flow rate of 1.05 mL/min. Potassium chloride and sodium chloride were used as reference substances for the determination of potassium and sodium content, respectively. In addition, the standard curves for potassium and sodium were linear over the range of 0.225~7.2 µg/mL ($r = 0.9998$), and 0.175~5.6 µg/mL ($r = 0.9998$), respectively. The average recovery ($n = 9$) was 100.16% for potassium (RSD = 0.42%), and 100.16% for sodium (RSD = 0.53%). Potassium citrate and sodium citrate dissolution of different samples from the same batch was complete in 20 min and matched the requirements of uniformity. In conclusion, the ion chromatography method was simple, rapid, accurate, sensitive and suitable for the determination of the content and the dissolution of potassium citrate and sodium citrate chewable tablets.

KEY WORDS: Content, Dissolution, Ion chromatography, Potassium citrate, Sodium citrate.

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