



Latin American Journal of Pharmacy
(formerly *Acta Farmacéutica Bonaerense*)

Lat. Am. J. Pharm. **30** (3): 554-7 (2011)

Short communication
Received: May 25, 2010
Revised version: July 6, 2010
Accepted: July 11, 2010

Microbiological Assay for Apramycin Soluble Powder

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SUMMARY. The aim of this study was to validate an agar diffusion method through the parameters linearity, precision and accuracy, to quantify apramycin in soluble powder. The calibration curve of apramycin was constructed by plotting log of concentrations ($\mu\text{g ml}^{-1}$) versus zone diameter (mm) and shows good linearity in the range of 1.0-4.0 $\mu\text{g.ml}^{-1}$. The precision of the assay was determined by assaying samples at the same day (repeatability - R.S.D. = 2.00%) and on different days (intermediate precision - R.S.D. = 5.06%) and indicate good precision. The accuracy expresses the agreement between the accepted value and the value found. The mean recovery was found to be 100.49 % for apramycin soluble powder. The results indicated that the microbiological assay proposed in this work hold linearity, precision and accuracy being an acceptable alternative method for routine quality control of apramycin in the pharmaceutical dosage form studied.

KEY WORDS: Agar diffusion method, Apramycin, Microbiological assay.

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