

## PARACETAMOL TABLETS (ACETAMINOPHEN TABLETS) – BY MS. LIPSA SAMAL

### Identification

Extract a quantity of the powdered tablets containing 0.5 g of Paracetamol with 20 ml of *acetone*, filter, evaporate the filtrate to dryness and dry at 105°. The residue complies with the following tests.

A. Determine by infrared absorption spectrophotometry. Compare the spectrum with that obtained with *paracetamol RS* or with the reference spectrum of paracetamol.

B. Boil 0.1 g in 1 ml of *hydrochloric acid* for 3 minutes, add 10 ml of *water* and cool; no precipitate is produced. Add 0.05 ml of 0.0167 M *potassium dichromate*; a violet colour

develops which does not turn red.

### Assay.

Weigh and powder 20 tablets. Weigh accurately a quantity of the powder containing about 0.15 g of Paracetamol, add 50 ml of 0.1 M *sodium hydroxide*, dilute with 100 ml of *water*, shake for 15 minutes and add sufficient *water* to produce 200.0 ml. Mix, filter and dilute 10.0 ml of the filtrate to 100.0 ml with *water*. To 10.0 ml of the resulting solution add 10 ml of 0.1 M *sodium hydroxide*, dilute to 100.0 ml with *water* and mix. Measure the absorbance of the resulting solution at the maximum at about 257 nm. Calculate the content of C<sub>8</sub>H<sub>9</sub>NO<sub>2</sub> taking 715 as the specific absorbance at 257 nm.

### Principle:

UV method