

# Absorption

# 5

*“As an innovative company we need a partner who fits in with our philosophy. GenPharmTox is a reliable, competent and brisk partner in realisation of our new development projects.”*

Dr. Thomas Kronbach, elbion AG



### 5.1. Caco-2 Permeability Assay

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## 5.1. Caco-2 Permeability Assay

Caco-2 cells are a well-established *in vitro* model used to predict intestinal absorption of drugs and chemicals in humans. Plated Caco-2 cells on a membrane support allows the study of drug transport from the apical side to the basolateral side (A to B transport) as well as from the basolateral side to the apical side (B to A transport). The apical and basolateral sides of Caco-2 cells represent the luminal and blood sides, respectively, of the gastrointestinal tract *in vivo*.

**Quantity of test item required:** 1 mg

**Turnaround time of draft report:** 20 working days after study initiation

### Analytics

- HPLC-DAD/FLD or LC-MS/MS or Radiodetection: detection of parent compound

### Transport

- triplicates
- Caco-2 cells
- one concentration of test item
- one time point (120 min)

### Kinetics

- triplicates
- Caco-2 cells
- one concentration of test item
- five time points (15, 30, 60, 90, 120 min)

### Positive Controls

- propranolol, testosterone (transcellular transport)
- mannitol (paracellular transport)
- glucose (carrier mediated)
- vinblastine inhibited by verapamil (P-glycoprotein mediated transport)
- measurement of transepithelial electrical resistance (TEER)