

ADI = Acceptable Daily Intake (ADI) of Curitor for a person weighing 70 kg
 = NOEL x [SF of 0.01], expressed as mg of Curitor /day
 = 13.755 mg Curitor/day x 0.01
 = 0.13755 mg Curitor /day

Other inputs

Equipment train (shared) surface area - 320,000 cm²
 Swab area = 10 cm x 10 cm = 100 cm²
 Rinse check weight – 400 kg (or 400 L water)

Step 2. Determine the SF to be used

A SF of 1/100 (0.01) will be used.

Step 3. Determine the Dose Maximum Allowable Residue (MAR_T)

$$\text{MAR}_T = \frac{T_A \text{ (mg of Curitor)} \bullet \text{conversion (} 10^6 \text{ mg of Remitor tablet/kg of Remitor tablet)} \bullet \text{(SF= 0.01)}}{B_B \text{ (units)} \bullet C_B \text{ (mg of Remitor formulation per tablet)}}$$

$$= \frac{10\text{mg} \times 10^6\text{mg/kg} \times 0.01}{(5 \text{ tablets} \times 273 \text{ mg/tab})}$$

$$= 73.3\text{mg Curitor/kg Remitor tablets}$$

$$= 73.3 \text{ ppm or } 73.3 \text{ mg/kg in the total equipment train}$$

Thus, maximum residue limit 73.3 mg of active ingredient in Curitor per kg of Remitor formulated drug product.

Step 4. Determine the Toxicity Maximum Allowable Residue (Tox MAR)

$$\text{Tox MAR} = \frac{\text{ADI (mg of Curitor/day)} \bullet \text{conversion (} 10^6 \text{ mg of Remitor/kg of Remitor)}}{B_B \text{ (units)} \bullet C_B \text{ (mg of Remitor per tablet)}}$$

$$= \frac{0.13755 \text{ mg} \times 10^6\text{mg/kg}}{(5 \text{ tablets} \times 273 \text{ mg/tab})}$$

$$= 100.8 \text{ mg Curitor/kg Remitor}$$

$$= 100.8 \text{ ppm or } 100.8 \text{ mg/kg in the total equipment train}$$

Thus based on Toxicity data, a maximum residue limit of 100.8 mg of Curitor (Product A) is allowed to be carried over into Remitor (Product B).

Note: Another approach to calculate the Tox MAR can be found in the Draft ISPE Baseline guide on Risk-MAPP⁵.

Step 5. Compare the calculated MAR_T and Tox MAR to the default limit of 10 ppm, and select the lowest