

9.2.5.4 Capacity Values

Theoretical Specific Capacity

Amount (mmol) of ionogenic group per mass (g) of dry ion exchanger. If not otherwise stated, the capacity should be reported per mass (g) of the H-form of a cation exchanger and of the Cl-form of an anion exchanger.

Volume Capacity (Q_v)

Amount (mmol) of ionogenic group per volume (cm^3) of swollen ion exchanger. The ionic form of the ion exchanger and the medium should be stated.

Bed Volume Capacity

Amount (mmol) of ionogenic group per bed volume (cm^3) (see *Bed Volume*) determined under specified conditions. The conditions should always be specified.

Practical Specific Capacity (Q_A)

Total amount of ions (mmole) taken up per mass (g) of dry ion exchanger under specified conditions. The conditions should always be specified.

Break-Through Capacity of Ion-Exchange Bed (Q_B)

The practical capacity of an ion exchanger bed, obtained experimentally by passing a solution containing a particular ionic or molecular species through a column containing the ion exchanger. This is under specified conditions and is determined by measuring the amount of species which has been taken up when the species is first detected in the effluent or when the concentration in the effluent reaches some arbitrarily defined value. The break-through capacity may be expressed in millimoles or milligrams taken up per gram of dry ion exchanger or per cm^3 of bed volume.