



NSK-B

Free Carnitine and Acylcarnitine Reference Standards

This set contains 10 vials of a dry mixture of eight isotopically labeled free carnitine and acylcarnitines. Accurate and complete reconstitution of the contents of one vial in 1 mL of high purity solvent will produce the concentrations presented in the Standard Concentrations table. Mix well. This solution becomes the concentrated acylcarnitine stock standard.

Dilution of Reference Standards Concentrated Working Stock

To prepare working stock solutions, one of the following procedures is suggested:

- Dilute 1 mL (reconstituted vial contents per instructions above) of the concentrated acylcarnitine stock standard with pure solvent.
- If Set A (Amino Acid Reference Standards) was purchased, mix 1 mL (vial contents) of concentrated standards from Set A with 1 mL of the concentrated standards from Set B.

Store the diluted standards in a tightly sealed vial at 4°C. In order to maintain the integrity of the solution, we recommend storing the sealed vials in a second sealed container. We recommend discarding this concentrated working stock solution after ~1 month. Stability data is being obtained.

Standards Concentrations

Reference Standard	Concentration (nmol/mL)
$^2\text{H}_9$ -Carnitine (free carnitine, CN)	152.0
$^2\text{H}_3$ -Acetylcarnitine (C2)	38.0
$^2\text{H}_3$ -Propionylcarnitine (C3)	7.6
$^2\text{H}_3$ -Butyrylcarnitine (C4)	7.6
$^2\text{H}_9$ -Isovalerylcarnitine (C5)	7.6
$^2\text{H}_3$ -Octanoylcarnitine (C8)	7.6
$^2\text{H}_9$ -Myristoylcarnitine (C14)	7.6
$^2\text{H}_3$ -Palmitoylcarnitine (C16)	15.2

For research use only. Not for diagnostic purposes.