



NSK-B – Free Carnitine and Acylcarnitine Reference Standards

This set contains ten 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 **Standards 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