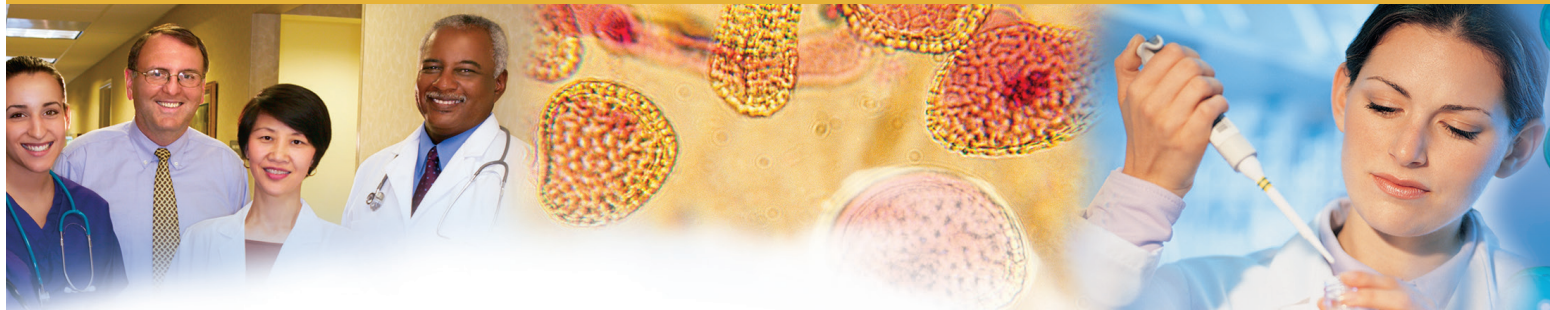




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NSK-S-CAH



NSK-S-CAH

Congenital Adrenal Hyperplasia (CAH)

Reference Standards

NSK-S-CAH Congenital Adrenal Hyperplasia (CAH) Reference Standards is designed as a calibrator for use in screening, diagnosis and monitoring procedures for metabolic disorders. When used as directed, NSK-S-CAH provides a solution containing steroids at defined concentrations. When combined with techniques such as tandem mass spectrometry (MS/MS), LC/MS, GC/MS, etc., the solution may be used as a calibrator to measure concentrations of steroids in plasma, blood spots, urine and other bodily fluids.

Each vial (packaged as 1 to 10 vials per box) contains only a dry mixture of isotopically labeled steroids. Complete reconstitution in 1 mL of solvent will produce the concentrations presented in the Standards Concentrations table.

Instructions for Use/ Method of Reconstitution

To reconstitute the NSK-S-CAH Congenital Adrenal Hyperplasia (CAH) Reference Standards solution, the following procedure is suggested: add 1 mL of purified methanol or suitable solvent to the dry mixture in the vial. Vortex the vial manually for one minute then auto-vortex for 30 minutes or until solids are dissolved. Use the same day or store the reconstituted standards in a tightly sealed vial in a freezer. In order to maintain the integrity of the solution, we recommend storing the sealed vial in a second sealed container. We recommend discarding the solution after one month.

Lacey, J.M.; Minutti, C.Z.; Magera, M.J.; Tauscher, A.L.; Casetta, B.; McCann, M.; Lymp, J.; Hahn, S.H.; Rinaldo, P.; Matern, D. **2004**. Improved Specificity of Newborn Screening for Congenital Adrenal Hyperplasia by Second-Tier Steroid Profiling Using Tandem Mass Spectrometry. *Clin Chem*, 50, 621-625.

Janzen, N.; Sander, S.; Terhardt, M.; Steuerwald, U.; Peter, M.; Das, A.M.; Sander, J. **2011**. Rapid steroid hormone quantification for congenital adrenal hyperplasia (CAH) in dried blood spots using UPLC liquid chromatography-tandem mass spectrometry. *Steroids*, 76, 1437-1442.

Standards Concentrations	
Reference Standard	Conc. (nmol/L)
17 α -Hydroxyprogesterone (2,2,4,6,6,21,21,21-D ₈)	20.0
4-Androstene-3,17-dione (2,2,4,6,6,16,16-D ₈)*	20.0
11-Deoxycortisol (2,2,4,6,6-D ₃)	20.0
21-Deoxycortisol (2,2,4,6,6,21,21,21-D ₈)	20.0
Cortisol (9,11,12,12-D ₄)	100.0
Price: \$220 (one vial)	

Handling, Storage and Disposal Instructions

Sealed vials, as received, can be stored at room temperature away from light with a recommended shelf life of two years. The recommended shelf life for methanol solutions is one month when kept in a freezer and away from light. The product should be disposed of properly: in the dry form, as a steroid and in solution as solvent waste.

Second-Tier Testing for Congenital Adrenal Hyperplasia (CAH)

The use of standards similar to the NSK-S-CAH Congenital Adrenal Hyperplasia (CAH) Reference Standards has been well documented in the scientific literature with detailed examples in the journal articles referenced below.

Dhillon, K.; Ho, T.; Rich, P.; Xu, D.; Lorey, F.; She, J.; Bhandal, A. **2011**. An automated method on analysis of blood steroids using liquid chromatography-tandem mass spectrometry: Application to population screening for congenital adrenal hyperplasia in newborns. *Clin Chim Acta*, 412, 2076-2084.

Rossi, C.; Calton, L.; Brown, H.A.; Gillingwater, S.; Wallace, A.M.; Petrucci, F.; Ciavardelli, D.; Urbani, A.; Sacchetta, P.; Morris, M. **2011**. Confirmation of congenital adrenal hyperplasia by adrenal steroid profiling of filter paper dried blood samples using ultra-performance liquid chromatography-tandem mass spectrometry. *Clin Chem Lab Med*, 49, 677-684.

For research use only. Not for diagnostic purposes. *Controlled substance. Currently requires DEA license; CIL has applied for exemption.

To place an order please contact CIL: | t: 978.749.8000 | 1.800.322.1174 (North America) | cilsales@isotope.com

For international inquiries, please contact our International Customer Service Department at intl@isotope.com.