

Fullscript-tested

Assessing creatine potency

At Fullscript, we're committed to independently testing products we distribute to provide quality assurance and validate important safety and efficacy label claims.

As part of our commitment to quality, we selected various products distributed by Fullscript to test for potency and/or purity claims. Based on US and Canadian industry guidelines, Fullscript's Medical Advisory Team defined **greater than 100%** of label claims as the qualifying benchmark for quality confirmation.

Learn more about Fullscript's commitment to quality.

About creatine

Creatine is a naturally occurring compound that is found in muscle tissue and involved in ATP production, the body's primary energy currency. Supplementation with creatine monohydrate is well-supported for supporting exercise performance, lean muscle mass, and recovery in both athletes and older adults. Emerging evidence also supports creatine's role in cognitive function and neurological health. (Riesberg 2016)

Populations that may benefit from creatine supplementation include vegetarians and vegans (who obtain less creatine from dietary sources), aging adults (to mitigate sarcopenia and support brain health), and athletes engaged in high-intensity training. (Naderi 2016) Creatine is also being studied for its role in female health across the menstrual cycle, pregnancy, and perinatal mental health.

Certain conditions and medications may affect creatine metabolism, such as statin-induced muscle complaints, neuromuscular disorders, or corticosteroid use, although creatine is generally safe and well-tolerated across most populations. (Antonio 2021)

Creatine quality concerns

Creatine supplement quality can vary widely, especially concerning **purity**, **heavy metal contamination**, and **mislabeling** of creatine content. The gold-standard form is **creatine monohydrate**, but not all products contain practitioner-grade material. Poorly manufactured products may include impurities like creatinine (a breakdown product), dicyandiamide, dihydrotriazine, or detectable levels of lead or arsenic.

Some creatine forms marketed as "advanced" (e.g., creatine ethyl ester, buffered creatine) lack strong clinical evidence and may be less effective or less stable than creatine monohydrate. (Fazio 2022)

To minimize risk, healthcare providers should recommend products that:

- Specify creatine monohydrate as the main ingredient
- Are third-party tested for **purity and contaminants** (e.g., NSF Certified for Sport, Informed Sport)
- Adhere to third-party current Good Manufacturing Practice (cGMP) certification

To learn more about creatine, check out our <u>blog</u>.

Did you know?

Some overage of primary ingredients is necessary for product shelf life. The US Food and Drug Administration (FDA) mandates that dietary supplements meet label claims until expiration. Manufacturers, therefore, add extra ingredient amounts to ensure compliance. Delivery formats with less integrity, such as gummies and liquids, lose potency faster and require additional overage amounts.

102.49%

Average percentage of creatine content compared to label claims for Fullscript-tested creatine products

Featured Fullscript-tested products

The Fullscript catalog experience allows you to filter Fullscript-tested products. The following are featured high-quality products that meet Fullscript's potency standards.

Product	SKU	Results
Thorne Creatine	TH0411	103.2%
Designs for Health Creatine Monohydrate Powder	DFH-CRTNMH	101.6%

References

- 1. Riesberg, L. A., Weed, S. A., McDonald, T. L., Eckerson, J. M., & Drescher, K. M. (2016). International Immunopharmacology, 37, 31–42.
- 2. Naderi, A., de Oliveira, E. P., Ziegenfuss, T. N., & Willems, M. T. (2016). Journal of Exercise Nutrition & Biochemistry, 20(4), 1–12.
- 3. Antonio, J., Candow, D. G., Forbes, S. C., Gualano, B., Jagim, A. R., Kreider, R. B., & Ziegenfuss, T. N. (2021). Journal of the International Society of Sports Nutrition, 18(1).
- 4. Fazio, C., Elder, C. L., & Harris, M. M. (2022). Journal of Strength and Conditioning Research, 36(9), 2663–2670.

