

# INSTANTLY DISSOLVING CREATINE POWDER WITH LONG SHELF LIFE FOR SPORTS AND MEDICAL USE

**A breakthrough creatine formulation that mixes clear in seconds, avoids clumping or grit and stays stable in heat and humidity.**

## Problem / Market Need

Traditional creatine supplements are limited by poor solubility, gritty texture, and low user compliance, especially in high-dose or ready-to-drink formats. Existing alternatives either dissolve poorly, taste unpleasant, or degrade in storage, limiting product innovation in both sports and medical nutrition. There is a growing need for a fast-dissolving, stable creatine format that's easy to use, versatile, and consumer-friendly.

## Description of Solution / Technology

This technology offers a next-generation creatine powder formulated with food-grade components that enable instant mixing in water and long-term shelf stability. When added to liquid, the powder disperses rapidly and forms a clear, grit-free solution within seconds, avoiding the sedimentation and stirring required by typical creatine monohydrate. The formulation complies with relevant regulatory safety standards.

The powder retains its stability under heat and moderate humidity, making it suitable for a wide range of supplement delivery formats, including sachets, capsules, gels, bars, and beverages.

## Key Benefits / Advantages

- Dissolves instantly in water with no clumping and no sediments
- Maintains physical stability in heat and humidity
- Enhances user experience with a smooth and clean mouthfeel
- Enables new product formats such as gels, ready-to-drink beverages, and high-dose sachets
- Scalable using established food-grade manufacturing processes

## Applications / Relevant Industries

Leveraging rapid solubility, stability, and formulation versatility, this creatine technology fits diverse applications, including:

- Sports Nutrition: Powders, gels, RTDs, and pre-workout stacks
- Clinical Nutrition: Recovery, mobility, and muscle support with age
- Nutraceuticals: Functional foods with improved compliance
- Functional Beverages: Clear, shelf-stable creatine drinks
- Wellness Products: Clean-label formats for active consumers

## Stage of Development

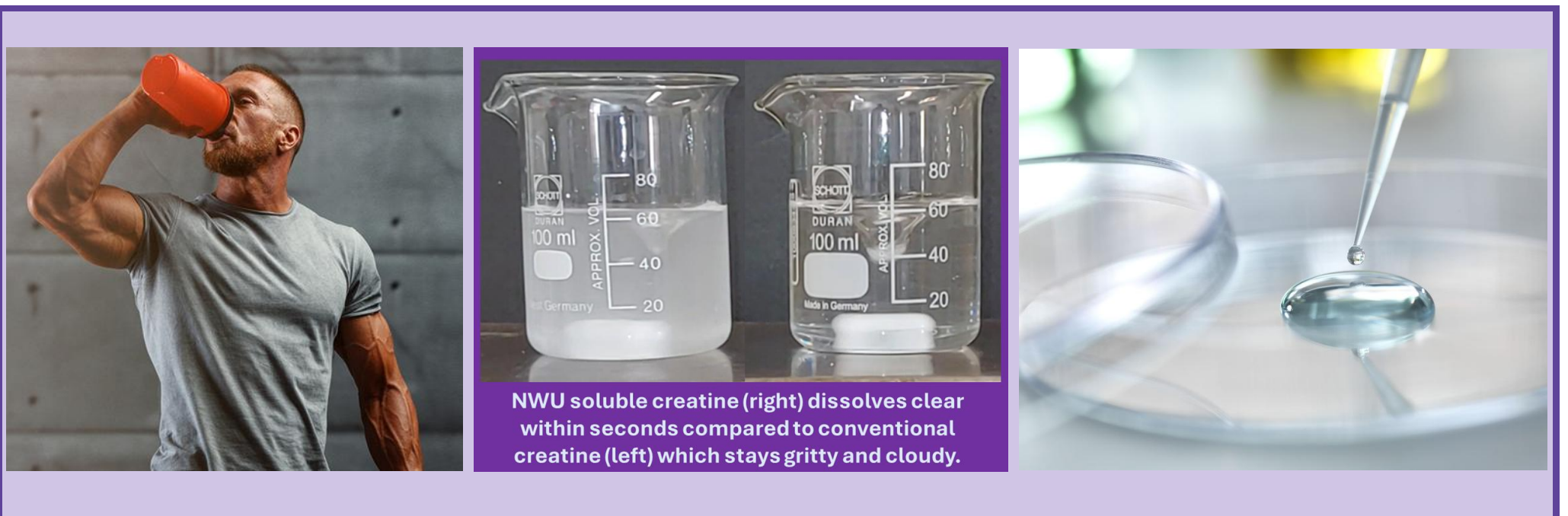
The formulation has been developed and validated under laboratory conditions, demonstrating clear advantages over conventional creatine powders in terms of solubility, clarity, and ease of mixing. Performance testing has shown rapid dissolution in water with no visible residue, while preliminary storage studies confirm the product remains physically stable under elevated temperature and humidity. The technology is now ready for commercial collaboration, product development, or scale-up.

## Intellectual Property Status

A provisional patent has been filed in South Africa (August 2025).

## Opportunity

This creatine powder technology is available for licensing, co-development, or integration into existing sports or clinical nutrition product lines. Companies seeking to deliver differentiated creatine-based products are invited to contact the Technology Transfer and Innovation Support office at NWU to discuss potential collaboration.



For enquiries contact:

**Technology Transfer and Innovation Support (TTIS)**

Dr Mesuli Mbanjwa

Senior Manager: Commercialisation

Email: mesuli.mbanjwa@nuw.ac.za; techtransfer@nwu.ac.za;

Tel: +27 18 299 4902

Image Credits: NWU; Microsoft Stock Images (via Microsoft 365)

Revision date: 17 September 2025

Reference Number: T2025-1154