

## **Physiological Functions and Properties of L-Citrulline**

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### **< Summary >**

L-Citrulline is one of the nonessential amino acids. It is not an amino acid used for protein synthesis, but is omnipresent in the human body. It was found in watermelon juice, and named after its scientific name, *Citrullus vulgaris* (Wada, 1930).

L-Citrulline is converted into arginine in the body, having the production of nitrogen monoxide (NO) and exhibiting vasodilating and other effects. It is also known to have the excretion effect of ammonia. Furthermore, citrulline malate is an OTC medical product used in Europe (France) for relieving fatigue. In the United States, it is used as a supplement for muscle-building, sports-performance enhancement and Viagra-like effects.

In this report, I will introduce the characteristics of L-citrulline, such as the structure, a concentration in foods and tissue, the physiological functions, and the safety information. Next, I will report briefly the bloodstream improvement effects of L-citrulline by oral intake on human volunteer, which carried out experiment within our company. And lastly, I will discuss the application to food of the L-citrulline.