



## **NIACINAMIDE**

### RESEARCH SUMMARY

Also called vitamin B3, niacin, and nicotinic acid, this water-soluble ingredient is stable in the presence of heat and light. Topical application of niacinamide has been shown to increase ceramide and free fatty acid levels in skin, prevent skin from losing water content, as well as stimulate micro-circulation in the dermis (Sources: British Journal of Dermatology, September 2000, pages 524-531; and Journal of Cosmetic Dermatology, April 2004, page 88). 2% niacinamide was shown in one small study to be more effective than petrolatum (Vaseline) for reducing water loss from skin and increasing its hydration levels (Source: International Journal of Dermatology, March 2005, pages 197-202). Procter & Gamble, whose Olay skin-care line sells several products with niacinamide, published a double-blind study involving 50 women. The subjects used a product containing 5% niacinamide (whether that amount is included in Olay's niacinamide products was not mentioned) for a period of 12 weeks. Results included an improvement in the appearance of wrinkles, skin discolorations, less redness, a reduction in sallowness, and improved elasticity (Source: Dermatologic Surgery, July 2005, pages 860-865). Another study seconded P&G's findings that niacinamide is a helpful ingredient to address skin discolorations. It appears that topical niacinamide has an inhibitory effect on the transfer of melanosomes to skin cells, thus it can interrupt the process that causes irregular pigmentation to form (Source: Experimental Dermatology, July 2005, pages 498-508).

In addition to niacinamide's growing reputation as an excellent barrier repair and skin lightening agent, some existing animal studies and in vitro studies on human fibroblasts (cells that produce connective tissue such as collagen) have demonstrated that niacinamide may have a mitigating effect on skin tumors (Source: Nutrition and Cancer, February 1997, pages 157-162). Fewer studies exist to examine niacinamide's anti-acne properties. An older study compared a gel containing 4% niacinamide with the prescription acne medicine Clindamycin and found it works just as well as the prescription, but without the risk of antibiotic resistance (Source: International Journal of Dermatology, June 1995, pages 434-437).

Perhaps even more important is the potential for niacinamide as a cell-communicating ingredient (Sources: Journal of Radiation Research, December 2004, pages 491-495; British Journal of Dermatology, October 2003, page 681; and Journal of Dermatological Science, volume 31, 2003, pages 193-201).