

# From fleece to grease

Lanolin is a yellowish oily substance trapped in the sheep's skin. It helps to protect the sheep, especially in extreme climates. Lanolin goes by many names including wool grease, wax, fat, and yolk. Because it is a by-product of wool scouring, lanolin is not overly expensive to extract, unless high-purity lanolin is sought. It is possible to obtain lanolin by washing your own wool. Because of its unique composition (a mixture of 170 fatty acids), lanolin (and its derivatives) have many uses including personal care products, pharmaceuticals, and industrial. Lanolin is a renewable resource; sheep produce more of it every year along with their fleeces. It is secreted by the sebaceous glands in their skin.



The amount of lanolin in a freshly shorn fleece ranges from 5 to 25 percent (by weight). One fleece could yield 250-300 mL of pure lanolin. It depends on breed and other factors, including the purity of the lanolin. Fine wool sheep tend to have high lanolin content in their fleeces. Wool allergies (or sensitivities) are likely due to lanolin (not wool). Hair sheep do not have lanolin, which is why their meat is often considered less “gamey,” as lanolin has been associated with stronger tasting meat. Goat fibers lack lanolin but have similar oils (which are not extracted).

Lanolin is a global industry estimated to be worth \$1.2 B in 2025. China is the world's largest producer, accounting for over 30 percent of global output. The US must import to meet domestic demand for skincare products. The market for lanolin is expected to grow as consumers seek more natural and sustainable ingredients.

## The many uses of lanolin

- Anti-seize lubricants
- Baby care products
- Eye makeup
- Facial cosmetics
- Food and nutritional supplements
- Foundation
- Hand cleaners
- Jointing pastes
- Leather conditioners
- Lipstick and lip balm
- Lubrication
- Moustache wax
- Nipple cream
- Paper conditioning
- Rust proof coatings
- Saddle soap
- Sealant
- Shaving cream
- Shoe polish
- Skin moisturizers
- Textile and wool processing
- Topical ointments
- Water proofing
- Wound healing

