



[The Use of Hexane in Oilseed Processing](#)

NOPA members operate oilseed processing facilities that use solvent extraction to safely and effectively produce protein-rich meal for human and animal nutrition, as well as vegetable oil for use as an ingredient in food manufacturing and as a feedstock for biofuels.

Since the 1930s, hexane has been the most widely used solvent to separate the fat (oil) from the protein (meal) in oilseeds due to its many beneficial attributes. It is efficient and reliable in extracting the oil while helping to preserve color and avoid unwanted bitter flavors for food grade oils. Because hexane evaporates so readily, it is also easily removed from the finished product, making it available for capture and reuse.

NOPA members continually work to improve their operational performance and maintain compliance with environmental, health and safety requirements while meeting consumer demands for high quality meals and oils.

The oilseed processing industry is carefully regulated and monitored by federal agencies including the U.S. Environmental Protection Agency (EPA), the Occupational Health & Safety Administration (OSHA) and the Food & Drug Administration (FDA). Each oilseed processing plant in the U.S. is subject to the requirements of an agency issued operating permit which restricts plant-wide hexane emissions in accordance with EPA's National Emissions Standards for Hazardous Air Pollutants [40 *CFR* 63.2830]. Compliance with OSHA and FDA requirements further mitigate risks associated with hexane exposure in the workplace and in consumer foods, respectively.

The U.S. Department of Health and Human Service's Agency for Toxic Substances and Disease Registry (ASTDR) has studied the potential toxicity and impact of exposure to hexane. Using precise modern analytical techniques and standard assumptions of human consumption of fats, the ATSDR concluded that the levels of hexane to which a person would be exposed is "a toxicologically insignificant amount."¹

Additionally, the European Commission's Scientific Committee for Food has issued an "*Opinion on Hexane Used As An Extraction Solvent.*" Using a conservatively high assumptions about the maximum content of hexane in food items and a person's total daily protein intake, the Committee concluded that a safety margin of 200 exists between the potential actual level of exposure to hexane in food and a safe level of hexane at which no observed effect would occur.²

¹ <https://wwwn.cdc.gov/TSP/ToxProfiles/ToxProfiles.aspx?id=393&tid=68>

² http://aei.pitt.edu/40844/1/35th_food.pdf (see pages 43-45 of the report for information on hexane)