

NCI OILSEED EXTRACTION SERVICES BY THE USE OF AN ARMFIELD HEXANE SOLVENT EXTRACTION UNIT

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The mission of the Northern Crops Institute is to support North Dakota, South Dakota, Minnesota and Montana agriculture production and value-added processing by conducting educational and technical programs that expand and maintain domestic and international markets for northern grown crops. Entities along the value chain of oilseed processing, from seed production through crushing and refining, are interested to in evaluating new oilseed varieties in pilot scale settings that approximate full scale hexane-based oil extraction systems.

The Northern Crops Institute has partnered with North Dakota State University to utilize the University's Armfield FT29 Batch Solvent Extraction and Desolventizing Unit. The FT29 is capable of a wide variety of solid/liquid batch extractions that are particularly suitable for extracting edible oils from seeds and is also suitable for desolventizing extracted solids and oil/solvent mixtures. The FT29 is operated by a collaboration between the Northern Crops Institute and the North Dakota State University Extension Pilot Plant to effectively hexane extract oilseeds and is now focusing on extracting soybean oil from new soybean varieties.

The Armfield FT29 is a self-contained, 25-liter batch process unit, that can extract 10 kilograms of oilseed per batch, and is ideal for producing a variety of solid/liquid extractions. Within each mode of operation of the FT29 unit, many operating parameters such as process temperature, solvent temperature, solvent flow rate, direct steam flow rate and system pressure can be adjusted to enable a high degree of crude oil extraction. In addition to hexane, the FT29 unit can employ a variety of alcohols, dilute acids, and water as the extraction solvent.



The Northern Crops Institute provides oilseed extraction services for oilseed breeders, processors, and distributors throughout the oilseed supply chain. The Institute also works with regional universities to produce and evaluate crude oil and extracted meal from new and unique oilseed commodities. The Institute's oilseed extraction services yields oil and meal products along with their processing parameters that can assist in evaluating oilseed crop varieties. For your next oilseed extraction project, contact the Northern Crops Institute to reserve your pilot production appointment. As always, the Northern Crops Institute's clients are most welcome during pilot plant operations.

If you are interested in more information on the oilseed extraction services we provide, please contact:

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