LAFLAYETTE (AP) — A flash of microwaves can pasteurize crawfish so they last much longer in the refrigerator or freezer, researchers at the University of Southwestern Louisiana said Monday.

The process is the first which lets uncooked crawfish tails be frozen with their fat, considered a critical component of Cajun and Creole crawfish cooking, said Nellie Derise of the home economics department.

“It’s used in just about any recipe — crawfish etouffee, jambalaya, sauteed crawfish, crawfish bisque. And they frequently recommend that you add additional head fat,” said Derise, who has a doctorate in nutritional biochemistry.

Tests so far have not been extensive enough to win Food and Drug Administration approval for the process, but indicate that the meat is safe, said Dr. Balbina Plotkin, a microbiologist.

Derise said nobody tasted the crawfish because they hadn’t been tested for safety yet, but those tests also came out fine.

Many people can freeze crawfish that long now, but they do so by freezing the meat in water, which washes off the fat, said Derise and Fournet.

“The fat has a very high bacterial count. There are possibly other enzymes in it which bring about spoilage and deterioration,” said Derise.

She said she wouldn’t recommend keeping unwashed and unmicrowaved frozen crawfish tails more than a month.

For the experiment, she said, plastic bags containing a single layer of crawfish meat — straight from the processing plant — were exposed briefly to high, intense microwaves.

They were then dunked into an ice bath to cool them quickly and were either refrigerated or frozen, she said.

Louisiana Crawfish Wholesalers Inc. and other processors donated crawfish meat to USL for the research, and are hoping that further tests find it safe enough to win federal approval.

“If it works, it will bring more business,” said Roy Robin, chairman of LCW and owner of Bayouland Seafood in Cecilia.

Not only will longer shelf life mean more markets, he said, but fat washed off is money down the drain.

U.S. engineering department is talking about possible designs for an industrial microwave for crawfish processors, said university spokesman Mike Maher.