## Modification of Natural Polymers-Starches for better application in Food Sector

Salient features	<ul> <li>Process technology for chemical modification of starch successfully developed.</li> <li>The modified starch will possess enhanced properties for advanced usage and meet the current demands of research in the field of food, pharmaceuticals and cosmeceuticals.</li> <li>Modification will also meet our needs of starch that is imported from other countries.</li> </ul>
Advantages	✓ Developed modified starches can be used in food Industry as viscosifiers and texturizers in soups, sauces, gravies, bakery and dairy products.
	✓ In batters and breading for coating various food stuffs, in confectionery as binders and film formers, in dairy as texturizers.
	$\checkmark$ In refrigerated foods as emulsion stabilizers and for encapsulation.
	$ \begin{array}{c} \hline \\ Raw \ material \end{array} \rightarrow \begin{array}{c} \hline \\ Reaction \ vessel \end{array} \rightarrow \begin{array}{c} \hline \\ Reaction \ vessel \end{array} \rightarrow \begin{array}{c} \hline \\ Centrifugation \end{array} $
	Principal     ←     ↓       Definition     ↓
	Pulverizing Drying
	$\checkmark$
	$\rightarrow$
	Sifting Final product
Process	Dr. Kirti Shivchandra Laddha, Department of Pharmaceutical Sciences & Technology

Process Technology developed by

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More information	<ul> <li>Status of commercialization / Patent / Publication</li> <li>Chemical modification of starches to enhance or alter their properties was successfully undertaken.</li> <li>As a part of commercialization, large scale manufacturing of the modified starches E1420 (acetylated starch), E1422 (acetylated distarch adipate) and E1450 (starch sodium octenyl</li> </ul>
	<ul> <li>(acetylated statch), E1422 (acetylated distatch adipate) and E1430 (statch solutin octenyl succinate) is currently undertaken at Vinayak Ingredients (India) Pvt. Ltd.</li> <li>However, the process employed can be applicable for large scale manufacturing of other the modified starches as well. This is an effort to meet our need of starch which is currently imported from other countries.</li> </ul>