

## Resistant Starch from Horse Chestnut and Rice

<i>Salient features</i>	<ul style="list-style-type: none"> <li>➤ Evaluation of starch of rice cultivars and horse chest nut for physicochemical, digestibility, structural, pasting and thermal properties.</li> <li>➤ Percent purity of resistant starch in rice and horse chest nut was in the range of 85.5 to 92.7% and 99.5%, respectively.</li> <li>➤ Microencapsulation of probiotic strains (<i>Lactobacillus Casei</i>, <i>Lactobacillus plantarum</i> and <i>Bifidobacterium bifidum</i>) in resistant starch extracted from rice and horse chest nut by freeze drying and emulsification techniques.</li> <li>➤ Utilizing the resistant starch as a coating material for the target delivery of beneficial microbes in the colon</li> </ul>
<i>Advantages</i>	<ul style="list-style-type: none"> <li>✓ Extraction of resistant starch naturally present in the rice and horse chestnut</li> <li>✓ Microencapsulation of probiotics with resistant starch offers an effective means of delivery of viable probiotics into the colon.</li> <li>✓ Use of starch in various food formulations</li> </ul>
<i>Process Technology / product developed by</i>	<p>Dr. Adil Gani, Department of Food Science &amp; Technology University of Kashmir, Srinagar, Jammu &amp; Kashmir E mail: <a href="mailto:adil.gani@gmail.com">adil.gani@gmail.com</a></p> <p>Prof. F.A. Masoodi, Sajad Mohd Wani, Dr. Idrees Mohd. Wani, Department of Food Science &amp; Technology. University of Kashmir, Srinagar, Jammu &amp; Kashmir</p>
<i>Year</i>	2015-16
<i>Source of funding</i>	MoFPI
<i>More information</i>	<p><b>Status of commercialization / Patent / Publication</b></p> <p>Gani, A., Ashwar, B.A., Akhter, G., Shah, A., Wani, I.A. and Masoodi, F.A. 2017. Physico-chemical, structural, pasting and thermal properties of starches of fourteen Himalayan rice cultivars. <i>International Journal of Biological Macromolecules</i>. 95: 1101-1107</p> <p>Ashwar, B.A., Gani, A., Shah, A. and Masoodi, F.A. 2018. Production of RS4 from rice starch and its utilization as an encapsulating agent for targeted delivery of probiotics. <i>Food chemistry</i>, 239: 287-294.</p>

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