DEVELOPMENT OF INSTANT MIX BASED ON LOCAL FOODS OF LADAKH

Poonam Sharma*, S.B. Ahmed and T. Tundup
Regional Agricultural research Station, Sher-e-Kashmir University of Agricultural Sciences and Technology-Kashmir, Leh (Ladakh)194001, India

ABSTRACT

A study was carried to prepare an instant mix using flours of roasted barley, roasted local peas, dried churphey and dried spinach. The developed instant mixes were stored in polyethylene pouches at ambient temperature. The sensory scores viz colour, flavour, taste, body and overall acceptability of the product after reconstitution was found highest (7.60) of T2 treatment followed by T3 (7.35) and minimum of (5.15) in treatment T1. The instant mix developed with flours of roasted barley, roasted local peas, dried churphey and dried spinach in the ratio of (40:20:10:30) in treatment T2 was found superior in terms of colour, flavour, taste, body and overall acceptability than rest of the treatments.

Key words : Instant mix, Food local, Ladakh.

Instant mixes have gained popularity by way of providing convenience to the consumer in recent years. Ladakh, a region of Jammu and Kashmir state remains cut off from the rest of the country for a long period of 6-7 months and thus people find it difficult to maintain their nutritional status during harsh winter months. The convenience mixes prepared by using local foods of Ladakh will provide a better option to the population. The studies on development of cereal based convenient mixes has been achieved (Premavalli et al., 1987 and 2005). An attempt has been made to develop the instant mix using local foods of Ladakh.

A laboratory experiment was conducted in Food Science Laboratory, RARS, SKUAST-K, Stakna, Leh (J&K) during 2006.

Procurement of material : Barley, local peas were procured from the farmers of the pheyang village of Leh district. Spinach (variety Mongol) was purchased from the local market. Churphey (a by-product of buttermilk) was prepared by boiling the buttermilk at 80°C and and constantly stirring for half an hour till the casein separates from the whey. The casein is then passed through the muslin cloth (hole is made in the centre of the cloth) and noodles are made according to the desired size and surdiied.

Processing Method : Cleaned barley and local peas were roasted and ground to powder using the dry blender and stored at ambient temperature in polyethylene bags. Spinach after blanching was sun dried and was also powdered. Churphey after sun drying and were also ground to powdered form and stored in polyethylene packs. Salt and spices were purchased from the local market.

Preparation and packing of instant mixes : Five suitable recipes were formulated in different proportions and prepared with proper mixing. The mixes were packed in (200g) in plastic containers and stored at ambient temperature.

Reconstitution : To 180ml of boiling water, instant mix (20gm) prepared was added, salt and spices were mixed well and simmered for 2-3 minutes. This product was then ready to serve.

Organoleptic evaluation : Reconstituted mixes were evaluated by a panel of judges for sensory evaluation such as colour, texture, taste, aroma and overall acceptability on a 9-point Hedonic scale with a score of 9 for "excellent" and 1 for "very much disliked". Samples above the score of 6 were graded as acceptable. To assess the consumer preference of instant mixes developed, parameters like colour, flavour, taste, consistency and overall acceptability...
were assessed. The sensory evaluation was carried out by a panel of 5 judges on a 9-point Hedonic Scale (Amerine et al., 1965). The experiment was laid out in completely randomized design with three replications. The data were statistically analyzed as described by Panse and Sukhatme (1978).

In order to provide natural sources of vitamins, minerals, proteins, energy and fiber etc instant mixes based on local foods of Ladakh have been developed. The green leafy vegetable spinach and churphey (a by-product of buttermilk) were found most promising with respect to stability of colour and vitamins. The results of the organoleptic evaluation of these mixes after reconstitution are given in Table 1. An instant mix using flours of roasted barley, roasted local peas, dried churphey and dried spinach. Five suitable proportions viz. $T_1$ (30:30:5:35), $T_2$ (40:20:10:30), $T_3$ (50:10:15:25), $T_4$ (60:5:20:15) and $T_5$ (100:0:0:0) were formulated and prepared with proper mixing. The samples were judged by a semi-trained panelist for organoleptic evaluation viz. colour, flavour, taste, body and overall acceptability. The results revealed that the colour score (8.20) was highest for $T_2$ and lowest (5.40) for $T_1$. The flavour score highest (7.40) was judged best for treatment $T_2$ over all other treatments. Taste score maximum (7.80) was obtained in $T_2$ than rest of the treatments and minimum score was found (5.20) in $T_4$ and $T_5$ treatments. Body score was highest (7.40) in $T_2$ and minimum score (4.40) in $T_5$. The overall acceptability score of (7.70) was obtained in $T_2$ and lowest (5.15) in $T_1$. The ratio of barley, local peas, churpey and green vegetables (mongol) in treatment $T_2$ (40:20:10:30) was found superior in terms of colour, flavour, taste, body and overall acceptability score. Thus it can be made easily by locally available foods and kept for ready to use.

### Table 1. Sensory quality of instant mix prepared from local foods at different proportions in Ladakh.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Proportion</th>
<th>Colour/Flavour</th>
<th>Taste</th>
<th>Consistency</th>
<th>Overall acceptability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Barley</td>
<td>Local peas</td>
<td>Churphey</td>
<td>Spinach (Mongol)</td>
<td>Appearance</td>
</tr>
<tr>
<td>$T_1$</td>
<td>30</td>
<td>30</td>
<td>5</td>
<td>35</td>
<td>5.40</td>
</tr>
<tr>
<td>$T_2$</td>
<td>40</td>
<td>20</td>
<td>10</td>
<td>30</td>
<td>8.20</td>
</tr>
<tr>
<td>$T_3$</td>
<td>50</td>
<td>10</td>
<td>15</td>
<td>25</td>
<td>7.80</td>
</tr>
<tr>
<td>$T_4$</td>
<td>60</td>
<td>5</td>
<td>20</td>
<td>15</td>
<td>5.60</td>
</tr>
<tr>
<td>$T_5$</td>
<td>100</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>6.20</td>
</tr>
</tbody>
</table>

CD at 0.01 0.269 0.798 0.129 0.197

**REFERENCES**


