

## ***Chemical composition, mineral profile and sensory properties of traditional cottage cheese varieties along the cheese value chain in selected areas of eastern Gojjam, northwestern highlands of Ethiopia***

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### ***Abstract***

This study was conducted to evaluate the chemical composition, mineral profile and sensory properties of Metata, Ayib and Hazo traditional cheese varieties obtained from dairy producers, dairy cooperatives and dairy product retail shops and kiosks in selected areas of Eastern Gojjam. The chemical composition and mineral content of the cheese varieties were analyzed following standard procedures. Sensory analysis was also conducted to assess the taste, aroma, color, texture and overall acceptability of these traditional cheese varieties. Metata cheese samples had significantly ( $p < 0.05$ ) lower moisture content and higher titratable acidity than Ayib and Hazo cheese samples. The pH value of Metata cheese was significantly ( $p < 0.05$ ) lower than Ayib and Hazo cheese samples. The protein, ash and fat contents of Metata cheese samples were significantly ( $p < 0.05$ ) higher than Ayib and Hazo cheese samples. The phosphorus, calcium, magnesium, sodium and potassium contents of Metata cheese samples were significantly ( $p < 0.05$ ) higher than Ayib and Hazo cheese samples. Metata cheese samples had the

highest consumer acceptability scores compared to Ayib and Hazo cheese samples. The results show that Metata cheese samples have higher nutritional value and acceptability as compared to Ayib and Hazo cheese samples obtained from all the sampling sources. This is because of fermentation of the cheese for several months/years and various types of spices used. Therefore, the effects of different spices on the biochemical properties of these traditional cheese varieties deserve detailed study in the future.

**Keywords:** Chemical composition, Consumer acceptability, Mineral profile

### ***Biography:***

Department of Food Science and Technology, Botswana University of Agriculture and Natural Resources, The research centers have a mandate to coordinate different national commodities. Some of the research centers and sites have one or more sub-centers and testing sites, for example, the Essential Oils Research Center (EORC).