SUGGESTIONS FOR FUTURE WORK

Sunflower meal is a rich source of proteins and polyphenols. The presence of polyphenols limits the application area of protein isolates. Presence of polyphenols significantly affects the functionality of protein isolates. Extraction of polyphenols from meal before preparation of protein isolates results in protein isolates with better functional properties and appearance. However the antioxidant properties of protein isolates are decreased due to removal of polyphenols. Removal of polyphenols with adsorption technique would be another option. Preparation of protein from polyphenols free meal would be alternative to expensive soy protein isolates currently available in market. Sunflower protein isolates can be utilized as functional ingredient in different food products like comminuted meats and sausages, yoghurts and puddings to control texture and mouth feel. It can be utilized as emulsifying agent in different bakery products, like cakes. Sunflower protein isolate can also be utilized in enhancing the protein content of different bakery, dairy products, pasta products and infant formulae. Utilization of sunflower protein isolates for the preparation of sports drinks can be another functional application. Edible packaging film can be developed from sunflower protein isolates. Film from protein isolate with polyphenols will have added advantage of antioxidant properties due to the presence of polyphenols. The bottleneck for exploitation of sunflower protein isolates at industrial level is its low solubility, which can be increased using different modification techniques. Controlled modification techniques can provide the protein isolates with different properties suitable for food industries. Better processing techniques are needed for preparation of sunflower meal to prevent the denaturation of proteins. Modification of protein isolates using controlled modification techniques in addition the techniques used in present study like high pressure technology, ohmic heating would result in protein isolates with varied functional properties.
Utilization of sunflower meal for the preparation of protein isolates would add value to this under-utilized crop. Sunflower protein could be utilized for the development of sports drinks.