

## عنوان مقاله:

Production of indigenous gluten extraction solution

## محل انتشار:

هشتمین همایش پژوهشی سالیانه دانشگاه علوم پزشکی سمنان (سال: 1401)

تعداد صفحات اصل مقاله: 1

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## خلاصه مقاله:

**Background and Objectives:** Celiac disease is a chronic autoimmune disease with 1% prevalence which is caused by eating gluten-containing foods such as wheat, barley, rye, and legumes and causes damage to the villi of the small intestine and reduces food absorption. Currently, the only effective treatment method for patients is to have a gluten-free diet throughout their lives. Providing gluten-free products requires confirmation of the absence of gluten using expensive gluten testing kits. The essential step in food gluten measurement is the gluten extraction step, which is done using a gluten preparation and extraction solution (cocktail). This expensive solution is purchased separately from the kit. Considering the high cost of the kit as well as its cocktail solution, the present study was designed with the aim of producing an indigenous cocktail and comparing it with an imported foreign sample. similar efficacy of indigenous cocktail can replace the imported cocktail. **Materials and Methods:** The gluten kit and cocktail solution were purchased (Biopharma, England). The indigenous cocktail formulation was prepared based on the various formulations of cocktail in the international databases and patents. The indigenous and foreign cocktail were used for extraction of gluten from several foods and then the amount of gluten was measured using an ELISA kit. **Findings:** The gluten concentration in indigenous cocktail group were compared to imported cocktail group. The results of gluten concentrations were similar to each other in two groups, Figure ۱-۳. **Conclusions:** Based on the obtained results, indigenous cocktail can be replaced by imported cocktail for the preparation and extraction of food gluten.

## کلمات کلیدی:

Gluten, celiac disease, extraction solution

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