Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 2026

Effect of B-glucan and resistant starch on physicochemical, reological and sensory properties of prebiotic bread

Protocol summary

Summary

Bread is one of the most valuable and most important food for humans. According to statistics, the average consumption of bread in the country is dedicated to be higher than any other food group. According to studies conducted by FAO in people of the Middle East and Near East countries , About 70% of theirs daily energy requirements may is gained from bread and other foods that are made from wheat. Because it can be an important source of energy, protein and other nutrients for the body. Prebiotic in products such as dietary fiber β-glucan and resistant starch may have physiological and metabolic effects on the human gut. In recent years they have been considered to reduce fat and blood sugar, prevent colon cancer, gastrointestinal diseases and obesity. In this study β-glucan and resistant starch were used for final formulation in prebiotic doses for the consumer sector, the technological and sensory properties of bread sampeles were defined. β-glucan and resistant starch, Seven samples of bread werae made with different kind of β-glucan and resistant starch property and the rheological, physicochemical and sensory property were evaluated. All bread samples are compared with the control one sensory property of bread samples were demined by eight trained panelists and they were asked to evaluate the bread using numeric rating scale. As the β-glucan and resistant starch are the natural components of foods, and has previously been used in various researches, this study has no ethical problem for consumers. The obtained data were analyzed by ANOVA using SPSS software.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201201015554N5**
Registration date: **2012-06-06, 1391/03/17**
Registration timing: **registered_while_recruiting**
Last update:
Update count: **0**

Registration date

2012-06-06, 1391/03/17

Registrant information

Name
Aziz Homayouni
Name of organization / entity
Tabriz University of Medical Scienses
Country
Iran (Islamic Republic of)
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+98 41 1231 3431
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homayounia@tbzmed.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice chancellor for research, Tabriz University of Medical Sciences

Expected recruitment start date

2012-04-02, 1391/01/14

Expected recruitment end date

2012-08-21, 1391/05/31

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of B-glucan and resistant starch on physicochemical, reological and sensory properties of prebiotic bread

Public title

Effect of B-glucan and resistant starch on physicochemical, reological and sensory properties of

prebiotic bread

Purpose

Prevention

Inclusion/Exclusion criteria

inclusion criteria: not having any diseases (including a cold); not smoking; exclusion criteria: having any diseases (including a cold); smoking

Age

From **20 years** old to **40 years** old

Gender

Both

Phase

2-3

Groups that have been masked

No information

Sample size

Target sample size: **8**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Single blinded

Blinding description

Placebo

Used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Tabriz University of Medical Sciences

Street address

Golbad Ave

City

Tabriz

Postal code

5166614711

Approval date

2010-08-20, 1389/05/29

Ethics committee reference number

9132

Health conditions studied

1

Description of health condition studied

healthy assessors

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

sensory evaluation of the 8 treatments and comparing them

Timepoint

Exactly after the consumption of 100 grams of the product

Method of measurement

questionnaire

Secondary outcomes

empty

Intervention groups

1

Description

100 grams of prebiotic bread prepared with beta-glucan, resistant starch and The combination of half of the percentage of added beta-glucan and resistant starch

Category

Prevention

2

Description

100 grams of regular bread

Category

Prevention

Recruitment centers

1

Recruitment center

Name of recruitment center

Tabriz University of Medical Sciences

Full name of responsible person

Dr. Aziz Homayouni Rad

Street address

Attar Neyshabouri Street, Golgasht Street

City

Tabriz

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice chancellor for research, Tabriz University of Medical Sciences

Full name of responsible person

Dr. Mohammad Reza Rashidi

Street address

Golbad Ave

City

Tabriz

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Vice chancellor for research, Tabriz University of Medical Sciences

Proportion provided by this source

100

Public or private sector

empty

Domestic or foreign origin

empty

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

empty

Person responsible for general inquiries

Contact

Name of organization / entity

Tabriz University of Medical Sciences

Full name of responsible person

zahra mohebbi nayeh

Position

MSc student in food science and technology

Other areas of specialty/work

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Person responsible for scientific inquiries

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Position

Assistant Professor, Department of Food Science and Technology

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Person responsible for updating data

Contact

Sharing plan

Deidentified Individual Participant Data Set (IPD)

empty

Study Protocol

empty

Statistical Analysis Plan

empty

Informed Consent Form

empty

Clinical Study Report

empty

Analytic Code

empty

Data Dictionary

empty