

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

08 Jun 2026

### the effect of antioxidative capacity of cinnamon tea and Vaccinium myrtillus on oxidative stress in petrochemical worker

#### Protocol summary

##### Summary

The aim of study is to explore the probable positive effects of vaccinium myrtillus and Cinnamomum zeylanicum on the petrochemical workers through measuring blood oxidative stress markers such as total antioxidant capacity (TAC), total thiol molecules (TTM), lipid peroxidation (LPO), myeloperoxidase (MPO), and DNA damage as the marker of genotoxicity. Male painter with age range 25-45 and the least 5 work history will be included the study. Individuals with chronic disease, alcohol consumption, antioxidant consumption, and/or under drug treatment, or exposure to toxic materials, radiation therapy, or substance abuse will be excluded from the study. The study will be performed on 50 male workers who work in petrochemical company. The included subjects will be administered vaccinium myrtillus and Cinnamon mixture infusion (3 and 0.5 g/100 mL) twice a day for 30 days at 7:00 AM and 2:00 PM every day. To survey the effect of infusion on oxidative stress, before and after using mixture infusion blood sample will be collected.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT2014010810003N6**

Registration date: **2014-09-07, 1393/06/16**

Registration timing: **registered\_while\_recruiting**

Last update:

Update count: **0**

##### Registration date

2014-09-07, 1393/06/16

##### Registrant information

###### Name

Ali akbar Malekirad

###### Name of organization / entity

Payame Noor University

###### Country

Iran (Islamic Republic of)

###### Phone

+98 86 2422 6073

###### Email address

malekirad@tabrizu.ac.ir

###### Recruitment status

**Recruitment complete**

###### Funding source

Islamic University of Damghan Branch

###### Expected recruitment start date

2014-09-06, 1393/06/15

###### Expected recruitment end date

2014-10-07, 1393/07/15

###### Actual recruitment start date

empty

###### Actual recruitment end date

empty

###### Trial completion date

empty

###### Scientific title

the effect of antioxidative capacity of cinnamon tea and Vaccinium myrtillus on oxidative stress in petrochemical worker

###### Public title

the effect of Vaccinium myrtillus and cinnamon on oxidative stress in petrochemical workers

###### Purpose

Prevention

###### Inclusion/Exclusion criteria

Inclusion Criteria: age range 25-45; male; the least 5 work history; petrochemical workers  
Exclusion Criteria: Individuals with chronic disease; alcohol consumption; antioxidant consumption; and/or under drug treatment; or exposure to toxic materials; radiation therapy; or substance abuse

###### Age

From **25 years** old to **45 years** old

**Gender**

Male

**Phase**

2-3

**Groups that have been masked**

*No information*

**Sample size**

Target sample size: **50**

**Randomization (investigator's opinion)**

N/A

**Randomization description**

**Blinding (investigator's opinion)**

Not blinded

**Blinding description**

**Placebo**

Not used

**Assignment**

Single

**Other design features**

**Secondary Ids**

empty

**Ethics committees**

**1**

**Ethics committee**

**Name of ethics committee**

Pharmaceutical Sciences Research Center, Tehran  
University of Medical Science

**Street address**

Pharmaceutical Sciences Research Center, Faculty of  
Pharmacy, Tehran University of Medical Science, 16  
Azar Street, Tehran 1417614411, Iran

**City**

Tehran

**Postal code**

1417614411

**Approval date**

2012-07-15, 1391/04/25

**Ethics committee reference number**

91-01-21:1-4

**Health conditions studied**

**1**

**Description of health condition studied**

Occupational exposure

**ICD-10 code**

Z57.5

**ICD-10 code description**

Occupational exposure to toxic agents in other industries

**Primary outcomes**

**1**

**Description**

total thiol groups

**Timepoint**

before and 30 day after intervention

**Method of measurement**

Hu method

**2**

**Description**

total antioxidant capacity of serum

**Timepoint**

before and 30 day after intervention

**Method of measurement**

Ferric Reducing Ability of Plasma method

**3**

**Description**

lipid peroxidation

**Timepoint**

before and 30 day after intervention

**Method of measurement**

thiobarbitturic acid method

**4**

**Description**

Myeloperoxidase activity

**Timepoint**

before and 30 day after intervention

**Method of measurement**

Elisa Method

**5**

**Description**

deoxyribonucleic acid Damage

**Timepoint**

before and 30 day after intervention

**Method of measurement**

Elisa method

**Secondary outcomes**

empty

**Intervention groups**

**1**

**Description**

The petrochemical workers will be administer vaccinium myrtillus and Cinnamon mixture decoction (3 and 0.5 g/100 mL) twice a day for 30 days at 7:00 AM and 2:00 PM every day.

**Category**

Prevention

## Recruitment centers

1

### Recruitment center

**Name of recruitment center**

Bandar Imam Petrochemical Complex

**Full name of responsible person**

Ali Akbar Malekirad

**Street address**

Bandar Imam Petrochemical Complex- Mahshahr- Iran

**City**

mahshahr

## Sponsors / Funding sources

1

### Sponsor

**Name of organization / entity**

Islamic Azad University of Damghan Branch

**Full name of responsible person**

Gholamhassan Vaezi

**Street address**

Islamic Azad University of Damghan Branch,  
Damghan, Iran

**City**

damghan

**Grant name****Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

**Title of funding source**

Islamic Azad University of Damghan Branch

**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**

Payame Noor University

**Full name of responsible person**

Ali Akbar Malekirad

**Position**

PhD.assistant prof.

**Other areas of specialty/work****Street address**

Amanipour Alley, Khoram street, Arak

**City**

Arak

**Postal code****Phone**

+98 86 1223 5541

**Fax****Email**

ak\_malekirad@yahoo.com

**Web page address**

## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**

Payame Noor University

**Full name of responsible person**

Ali Akbar Malekirad

**Position**

Assistant prof. of Physiology

**Other areas of specialty/work****Street address**

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**Web page address**

## Person responsible for updating data

### Contact

**Name of organization / entity**

Payame Noor University

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PhD.assistant prof.

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## 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*