

# **Bioactive substances from different parts of sea buckthorn**

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# Aims of research

- To investigate the different methods of preparing samples
- To investigate the different extraction methods
- Research on composition of bioactive substances from different parts of sea buckthorn

# *Experimental design*

- Samples
  - . Preparation of samples
    - » Extraction methods

# Samples:

- . Berries
  - . Wood
    - . Leaves
      - . Bark

# Preparation of samples

- . Purification
  - . Storage
    - . Preparation for analysis

# Extraction methods

- Maceration in petroleum ether for three times (15 min each) under sonication
- Maceration in ethanol for three times (15 min each) under sonication
- Simple maceration in ethanol at 80°C for 2 h under sonication
- Soxhlet extraction with petroleum ether at 75°C for 3 h

## *Experimental Design*

- » Soxhlet extraction with acetone at 80°C for 3 h
- » Soxhlet extraction with ethanol at 90°C for 3 h
- » Complex extraction as follows:
  - Extraction with chloroform and ethanol
  - Extraction with ethanol at room temperature
  - Extraction with ethanol at boiling temperature
  - Extraction with acetone

The extracts were analyzed to determine:

- Phospholipids
- Fatty acids
- Allantoin
- Saponins
- Flavonoids

























