CHEMICAL PARAMETERS OF WATER'

WATER UNITES US'

Water unites us!



KA2 ERASMUS+ STRATEGIC PARTNESHIPS SCHOOL PROJECT

OLAINES 1.VIDUSSKOLA MEETING IN LECCE, ITALY 16.04.-20 04.2018.

THE MISA RIVER



• Water of the Misa river is used for needs of the town and factories.

• It has ten small tributaries (the longest of them - Teļķe, which is 34 km long).

• The Misa flows into the 5th longest river in Latvia – the Iecava river.

THE MISA RIVER

THE MISA RIVER



KLĪVES (LĪDUMU) QUARRY

- Human made water basin, made in 1983.
- 22 hectares big quarry.
- It is a very popular swimming place for Olaine citizens in summer.
- Līdumu quarry does not have any outflows.



KLĪVES (LĪDUMU) QUARRY

THE PURIFIED WATER CANAL

Water from Olaine purification station flows there.





OLAINE CITY CANAL



EXPRESS ANALYSIS OF WATER.





PHOSPHATE (PO₄) CONCENTRATION INTO THE WATER

- We poured water sample into the test tube.
- We put indicator into the test tube with water and moved it fast for 30 seconds.
- After these 30 seconds we matched water into the test tube with the given example and read the result.



NITRITE (NO₂) AND NITRATE (NO₃) CONCENTRATION INTO THE WATER

- We put the indicator into the flask of water for 2 seconds and moved it.
- We took it out and shaked water into the flask.
- We waited for 60 seconds.
- We read the results in 1 minute.



IRON (Fe⁺²) CONCENTRATION INTO THE WATER

- We put the indicator into 200 ml of water for 30 seconds and moved it.
- We took it out and waited for another 30 seconds.
- We matched it with an example and read the results.



HARDNESS OF WATER

- We put the indicator into 200 ml of water sample for 3 seconds.
- We took it out and removed excess water.
- We compared to a colour of the indicator.
- We read the result.



pH LEVEL OF WATER

- We put the indicator into 200 ml of water sample for 10 seconds and moved evenly.
- We removed excess water.
- We read ph index in 10 seconds.







THE RESULTS OF A RESEARCH STUDY

WATER FROM THE MISA RIVER

- PO₄ (PHOSPHATE) 1,5 mg/l
- NO₂ (NITRITE) NONE
- NO₃ (NITRATE) NONE
- $Fe^{+2} NONE$
- SOFT WATER
- pH LEVEL 6 pH



WATER FROM KLĪVES QUARRY

- PO_4 (PHOSPHATE) 1,5 mg/l
- NO₂ (NITRITE) NONE
- NO₃ (NITRATE) NONE
- $Fe^{+2} NONE$
- SOFT WATER
- pH LEVEL 6 pH



WATER FROM THE PURIFIED WATER CANAL

- PO₄ (PHOSPHATE) NONE
- NO₂ (NITRITE) NONE
- NO_3 (NITRATE) 5 mg/l
- $Fe^{+2} NONE$
- SOFT WATER
- pH LEVEL 6 pH



- pH LEVEL 6 pH
- SOFT WATER
- $Fe^{+2} NONE$
- NO₃ (NITRATE) 0.06 mg/
- NO₂ (NITRITE) NONE
- PO₄ (PHOSPHATE) 1 mg/l (ppm)

WATER FROM OLAINE CITY CANAL O



- pH LEVEL 5 pH
- SOFT WATER
- $Fe^{+2} NONE$
- NO³ (NITRATE) NONE
- NO² (NITRITE) NONE
- PO⁴ (PHOSPHATE) NONE



SNOW

THE RESULTS

	PO ⁴	NO ²	NO ³	Water hardness	Fe ⁺²	pH level
The Misa river water	1,5 mg/l	none	none	soft	none	6 pH
Klīves quarry water	1,5 mg/l	none	none	soft	none	6 pH
Water from the canal where flows purified water	none	none	5 mg/l	soft	none	6 pH
Water from Olaine city canal	1 mg/l	none	0,06 mg/l	soft	none	6 pH
Snow	none	none	none	soft	none	5 pH

THE USE OF SENSOR













- Water from Olaine city canal has 0,00000199 mg/l Fe⁺³ in it.
- Water from the purified water canal has 0,0000571 mg/l Fe⁺³ in it.



THANK YOU FOR YOUR ATTENTION!