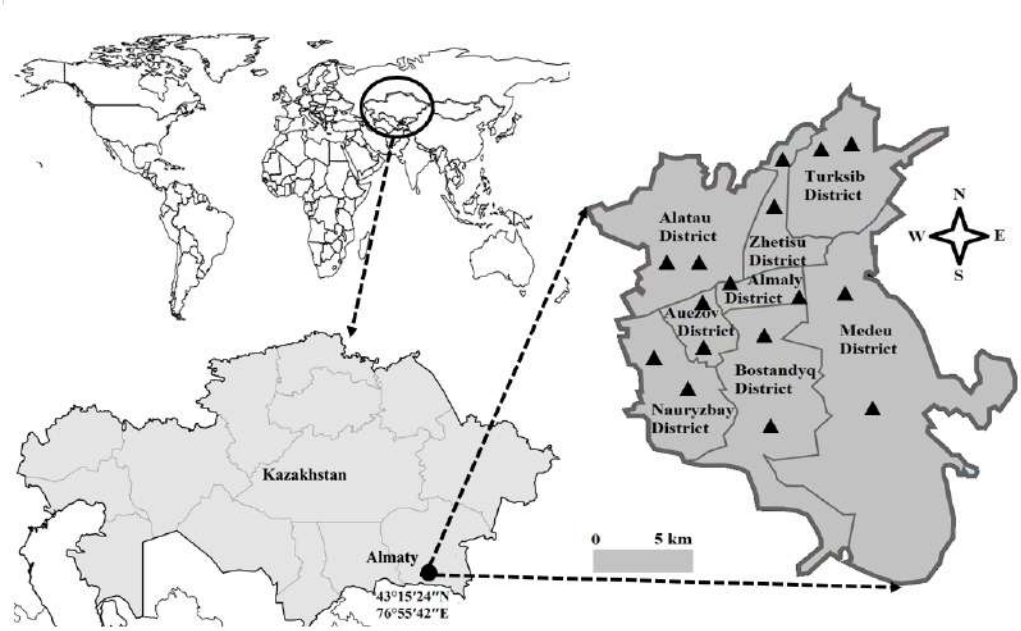

Fig. 1. Sampling points (▲) on the map of Almaty.

[11, 12]. The intensity of the taste of all selected water samples was 0 points and meet the requirements for the quality of drinking water of Kazakhstan sanitary norms [11, 12].

3.4. Color

Dissolved and suspended impurities in water determine its color (colloidal compounds, humic and colored substances). The color of water can vary from colorless to brown, depending on the amount of humic acids and their salts (humates) [12]. A quantitative assessment of the color of drinking water is expressed in degrees of color by photometric comparison of water samples with a scale of color solutions that mimic the color of natural water and is expressed in color degrees of this scale [12]. If there is no color, the water is considered colorless. According to the norms, the color of drinking water should be no more than 20°. The color scale was prepared by mixing color solutions in different ratios. Quantitatively, the color of water samples was determined by the chromate-cobalt scale. The color scale was prepared by mixing solution No. 1 (0.0875 g of potassium bichromate ($K_2Cr_2O_7$)) with solution No. 2 (2.0 g of cobalt sulfate ($CoSO_{4\cdot7}H_2O$)). The color scale was prepared in five cylinders of 50 ml each by mixing solutions No. 1 and No. 2 in various ratios. The optical density or water samples and color solutions of the chromium-cobalt color scale are measured at a wavelength of 380 nm relative to distilled water [11, 12]. The results of water color studies showed that the color of all selected water samples was 0 points and thus met the requirements for drinking water quality of Kazakhstan sanitary norms [11, 12].

3.5. Turbidity

The turbidity of water is due to coarsely dispersed impurities undissolved in water, i.e., suspended solids: particles of sand, silt, clay, plankton, decay products of plant and animal organisms. Quantitative determination of turbidity of drinking water samples was carried out by the nephelometric method on liquid analyzers "FLUORAT®-02-5M" [12]. The turbidity value was measured automatically using the calibration curve stored in the instrument's memory. The turbidity value of drinking water should be no more than 2.6 FMU (turbidity units according to formazin) according to Kazakhstan sanitary norms [12]. For all drinking water samples, the turbidity index was below a threshold and thus met the requirements for drinking water quality of Kazakhstan sanitary norms [11, 12].

4. General characteristics of drinking water

4.1. Dry residue

Dry residue is the total amount of substances dissolved in a unit volume of water. The dry residue is