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Selenium Speciation in Karakaya Dam Lake's Water (Malatya-Turkey)

F. Zehra KÜÇÜKBAY

İnönü University, Faculty of Science and Arts, Department of Chemistry,  
44069 Malatya-TURKEY

Mustafa DEMİR

Adnan Menderes University, Faculty of Science and Arts,  
Department of Chemistry, 09010 Aydın-TURKEY

 [Keywords](#)  
[Authors](#)



[chem@tubitak.gov.tr](mailto:chem@tubitak.gov.tr)

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**Abstract:** Concentrations of total inorganic selenium, Se(IV), Se(VI) and organically bonded selenium from samples of Karakaya dam lake's water were determined using ammonium pyrrolidine dithio carbamate (APDC) as a chelating agent and subsequent adsorption on amberlite type XAD-8 resins. Eluted analytes are taken up in a matrix free acidic solution suitable for graphite furnace atomic absorption spectroscopy (GFAAS). According to our results, levels of the total inorganic selenium, Se (IV), Se(VI) and organically bonded selenium were found to be between 0.11  $\mu\text{g/L}$  and 0.17  $\mu\text{g/L}$ , 0.07  $\mu\text{g/L}$  and 0.12  $\mu\text{g/L}$ , 0.02  $\mu\text{g/L}$  and 0.05  $\mu\text{g/L}$ , and 0.05  $\mu\text{g/L}$  and 0.08  $\mu\text{g/L}$ , respectively.

**Key Words:** Selenium speciation, Atomic absorption spectroscopy, Enrichment, Trace element.

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