

# Assessment of Groundwater Quality Around of Transfer Station and Municipal Solid Waste Lanfill in Ardabil

## ABSTRACT

**Background & Objectives:** Groundwater is exposed to environmental pollution. The leachate produced by wastes in transfer station or municipal solid waste landfill is one of the sources of pollution. In this view, present study was carried out to evaluate the groundwater quality around of municipal solid waste transfer station and landfill in Ardabil at 1396.

**Materials and methods:** In this cross sectional study, 6 wells (control wells in the upstream and 5 wells in the downstream) in around the transfer station and 6 wells (2 wells in the upstream and 4 wells in the downstream) in around the ardabil municipal solid waste transfer station and landfill were selected, and the quality parameters of the samples (temperature, turbidity, pH, EC, TDS, BOD5, COD, nitrate, chromium, lead, zinc, coliform and fecal coliform and ...) were analyzed according to the standard methods. Also, particle-size analysis of soil was carried out in sampling area and data analysis was performed using Excel software and compared with standards and existing guidelines.

**Results:** In all samples of water around the transfer station, except lead (0.07-0.1 mg/l), coliform and fecal coliform (0-28 and 0-4 MPN/100 ml), other Parameters below the recommended limit recommended by existing standards and standards. Also, In all water samples the landfill, except hardness (238-740 mg/l  $\text{CaCO}_3$ ) coliform and fecal coliform (4-76 and 0-15 MPN/100 ml), other parameters were lower than recommended standards.

**Conclusion:** The results of the study showed that the transfer station and municipal solid waste landfill in Ardabil had no significant effect on the groundwater quality in the surrounding area.

**Keywords:** Groundwater; Leachate; Transfer Station; landfill; Ardabil