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Summary report on the springs utilized by Akva

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Report
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Summary Report on
the Springs Utilized by Akva

On the basis of hydrogeological mapping in the vicinity of Akureyri, North Iceland, the following statements can be made:

- The *Hesjuvalla springs* refer to the discharge area used as water supply by Akva. The water has been under offical inspection for decades, since the springs have been a source for potable water from 1958. Therefore its quality can be guaranteed. The springs are now operated for the benefit of Akva.
- The water derives from a local groundwater stream feeding several springs situated on a steep valley slope. The supply springs are incased in spring boxes made of concrete and the water is never exposed to daylight. This type of boxes is proven not to affect the the quality of the water derived. No pumps of any kind are used; the water is piped by gravity to the bottling factory.
- The yield is affected by natural fluctuations of the groundwater table; usually highest at the end of July but lowest in April. The mean value, according to continuous measurements during the last eight years, appears to be close to 40 l/s (approx 630 US gal/min).
- The groundwater is a mixture of precipitation of different age, as everywhere. The age does not tell much about its quality. The hydrogeological setting indicates however that water of different age is sufficiently mixed in the aquifer. Changes in temperature, dissolved solids ect. are therefore assumed to be negligible.
- The catchment area is situated between 500 and 1200 m above sea level. The landscape is mountainous, sparsely vegetated and unhabitated. No natural or industrial pollutants are known to be present and there are no plans to change the present land usage of the area. The groundwater is low in dissolved solids, as well as in temperature, conductivity and acidity.

Typical figures describing the yield and physical properties of the water used by Akva:

Mean yield	Min yield	Max yield	Tempe-rature	Conduc-tivity	pH value	Dissolved solids
39 l/s	**17 l/s**	**78 l/s**	**3,1°C±0,2°**	**50μS±5**	**pH 7,7±0,2**	**41 - 53 ppm**

Data extracted from various sources, but those collected by Akureyri Municipality Water Supply beeing the most important. (l/s = liters per second, μS = microsimens, ppm = parts per million)

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