

An Assessment of the Quality of Iceland

Spring Bottled Water

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**“Compared to over 45 bottled waters<sup>1</sup> previously studied by the Environmental Quality Institute in overall quality we have found none better than Iceland Spring.”**

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<sup>1</sup> Including: Dasani, Fiji, Deer Park, Evian, Volvic, Aquafina, Poland Spring, Snap20, Dannon, Crystel Geysler.

## **I. Background and Introduction**

This assessment of Iceland Spring bottled water is based on an intensive and detailed review of testing results which Iceland Spring had performed by NSF International, which is the leading independent bottled water certification organization in the world, as well as on some additional testing conducted at the UNC-Asheville Environmental Quality Institute, which is widely recognized as a leading United States drinking water research center. The quality of bottled water is an issue that has justifiably received increased public and regulatory agency attention. Several recent studies show that many bottled waters are of no greater purity than typical municipal tap water, and in fact, are generally regulated and tested less stringently than tap water (e.g. Olson, 1998; Maas et al, 1997; Maas et al, 2003).

Iceland Spring water was tested very thoroughly by NSF International and found to be compliant for NSF certification, however the purpose of this report was to look beyond just official bottled water certification requirements to an absolute quality assessment and a comparison with other bottled waters.

## **I. Assessment Results and Discussion**

### **A. Inorganic Constituents**

No toxic inorganic chemicals such as heavy metals were detected by the NSF testing. A trace of nitrite- N (0.010 mg/L) was detected, but this is a level that is only one-one hundredth of the U.S. FDA and U.S. Safe Drinking Water Act limit of 1.0 mg/L, which in turn was promulgated with a large extra safety margin for pregnant women, and thus this

concentration is considered to be of no safety concern. (Levels of nitrite above 1.0 mg/L are considered to very slightly increase the chances of “blue- baby” disease.)

One common natural contaminant that has become an increasing public health concern in spring water is arsenic. Arsenic often occurs naturally in spring water and has recently been found to be far more carcinogenic than previously believed. Many health professionals believe that the 10 ug/L standard for bottled water and for U.S. public water supplies is too high. NSF testing detecting down to 2.0 ug/L did not find any arsenic in Iceland Spring water, but Environmental Quality Institute laboratory tests (which are the most sensitive available with a detection limit of almost 0.3 ug/L), found a trace of naturally occurring arsenic at a concentration of 0.67 ug/L. The great majority of bottled spring waters naturally contain some arsenic, and the 0.67 ug/L (found as a mean from three samples of Iceland Spring water) rates this water as one of the best bottled spring waters in terms of having extremely low naturally occurring arsenic levels.

From a long-term health perspective one of the best aspects of the Iceland Spring water is that, unlike many spring waters, it is quite low in minerals such as calcium, magnesium, sulfates, chlorides, potassium, sodium, and in fact, all suspended solids in general. It is increasingly recognized by public health professionals that long-term ingestion of high mineral content water represents a strain on the cardiovascular system. Iceland Spring water, in contrast, is low mineral content water, which can be consumed, even in very large daily amounts, with no concern for excessive mineral build-up.

## **B. Toxic Synthetic Organic Chemicals**

Iceland Spring water was analyzed by NSF International at very low detection limits for over 130 different synthetic organic chemicals, pesticides, industrial solvents, disinfection by-products, and petroleum related chemicals which together are common ground water and/or spring water contaminants in millions of private and public water supply wells in the United States and worldwide. This intensive chemical analysis revealed absolutely no trace of any such chemical contaminants. Apparently, the aquifer supplying Iceland Springs water is completely free of any of the dozens of common groundwater contaminants often found in U.S. spring and well water.

## **III. Summary and Conclusions**

Iceland Spring water has been exhaustively tested for nearly every conceivable spring water contaminant with great analytical sensitivity by NSF International, the worlds' foremost bottled water certifying agency, and by the University of North Carolina- Asheville Environmental Quality Institute, one of the United States' leading drinking water research centers. It is free of any detectable levels of inorganic trace metal contaminants, and its ultra trace level of naturally-occurring arsenic is significantly lower than the majority of spring waters marketed in the United States. This water has been found to be of exceptionally high quality as evidenced by the complete absence of any synthetic, toxic, or industrial chemical pollutants. Extensive laboratory analyses of this water indicates clearly that it is derived from a source unaffected by any human, industrial, agricultural, or animal activity. Compared to over 45 bottled waters previously studied by the Environmental Quality Institute in overall quality we have found none

better than Iceland Spring. Iceland Spring water also has the long-term health advantage over most bottled spring waters of having a very modest sodium, calcium, and overall mineral content. This might be potentially advantageous for individuals with any elevated risk of cardiovascular disease as well as those who typically consume large volumes of water on a daily basis.

#### IV. References

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Dr. Richard Maas is co-director of the University of North Carolina- Asheville Environmental Quality Institute, which is widely recognized as one of the United States' leading drinking water research centers. Dr. Maas has a Ph.D. in aquatic chemistry from the School of Public Health at the University of North Carolina, and he has authored over 70 original research publications in the drinking water field. He is recognized internationally as a leading authority in the water supply field and is a frequent consultant to government agencies, the print media, nonprofit organizations, and the private sector on drinking water issues.