



CERTIFICATE OF ANALYSIS

ATTENTION: H₂O International – Ignus Muller**DATE:** 21 February 2012**1. GENERAL:** Vippita Natural Water – Spring Sample – Sampled 25 January 2012

DETERMINANTS CONSTITUENTS	Results expressed in mg/l unless specifically stated	
	Vippita Natural Water	WHO – QC Standard Bottling Guideline Limits
Conductivity (µS/cm)	262	Not Specified
Total Dissolved Solids (TDS @ 105 °C)	196	20 to 500
pH	7.72	6.5 to 8.5
Turbidity (NTU)	0.17	< 0.2
Total Suspended Solids (TSS)	BDL	Must be absent
Alkalinity (Total as CaCO ₃)	135	20 to 200
Free & Saline Ammonia (NH _x as N)	BDL	< 0.2
Calcium (as Ca)	29.5	5 to 80
Magnesium (as Mg)	17.4	3 to 30
Sodium (as Na)	5.3	5 to 100
Potassium (as K)	1.7	≤ 10
Chloride (as Cl)	4.8	5 to 100
Sulphate (as SO ₄)	1.6	≤ 200
Nitrate (NO ₃ as N)	0.11	≤ 5
Fluoride (as F)	0.08	≤ 0.5
Aluminium (Al) (µg/l)	3	≤ 50
Iron (Fe) Total (µg/l)	BDL	≤ 50
Manganese (Mn) Total (µg/l)	BDL	≤ 20
Total Heavy Metal Content (µg/l)	BDL	< 20
Active Chlorine (HOCl)	BDL	< 50
Dissolved Organic Carbon (DOC)	3.8	≤ 5
Disinfectant by-products (Total)	BDL	< 50

BDL = Below Detection Limit	TON = Threshold Odour Number
mg/l = Milligrams per litre = Parts per million	µg/l = Micrograms per litre = Parts per billion
Please Note: This report only relates to the actual water sample supplied and analysed. No responsibility can be accepted, related to the use of these results and recommendations provided.	

2. DISCUSSION:

Notes:

- This laboratory makes use of the World Health Organisation (WHO) Quality Control (QC) standard and guideline limits mustered specifically for potable water bottling applications, as apposed to the SABS or SANS standards. This standard is more helpful, applicable and explicit in showing up the inherent problems.
 - Be aware of the units of concentration used in the above table. ($1.0\text{-mg}/\ell = 1,000\text{-}\mu\text{g}/\ell$).
- I. Some variation in the mineral content was encountered relative to the previous samples examined for this water source, but the water can nevertheless be labelled as consistent.

If any additional queries or questions crop up please do not hesitate to contact me at the above address.

Yours sincerely



Gordon Reid
Water & Wastewater Treatment Division