



VÍZKUTATÓ VÍZKÉMIA KFT

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Analysis Number
42181/4

REPORT OF WATER ANALYSIS

CLIENT:

Name: *HYD Rákkutató és Gyógyszerfejlesztő Kft.*
Address: *1118 Budapest, Villányi út 97.*

SAMPLE:

Name: *PREVENTA-85*
Sample: *Deuterium depleted drinking water*


SAMPLING:

Sampler: *Client*
Sampling: *Client*

Date of sampling:	-	Start of test:	<i>13/05/2019</i>
Date of receive:	<i>13/05/2019</i>	End of test:	<i>20/05/2019</i>



Date of issue: *20/05/2019, Budapest*


Szakács Imre
Head of Laboratory

This report only have connection with the sample(s) specified above. The sample identification is the Sampler's responsibility. This report may copy only in its entirety.

Vízutató VÍZKÉMIA KFT. Vizsgálólaboratóriuma
A NAH által NAH-1-1217/2018 számon akkreditált vizsgálólaboratórium. (Accredited laboratory)

Name: **PREVENTA-85**

 Sample: **Deuterium depleted drinking water**

Date of sampling: -

REPORT OF MINERAL WATER ANALYSIS

Cation	mg/l	meq/l	meq %	Anion	mg/l	meq/l	meq %
Na ⁺	9,4	0,41	9,89	NO ₃ ⁻	20	0,32	7,96
K ⁺	0,5	0,01	0,31	NO ₂ ⁻	< 0,01	0,00	0,00
Li ⁺	-			Cl ⁻	2,2	0,06	1,53
NH ₄ ⁺	< 0,02	0,00	0,00	Br ⁻	< 0,02	0,00	0,00
Ca ²⁺	40,1	2,00	48,41	I ⁻	< 0,01	0,00	0,00
Mg ²⁺	20,8	1,71	41,38	F ⁻	0,08	0,00	0,10
Fe _{solved}	-			SO ₄ ²⁻	2,6	0,05	1,34
Mn _{solved}	-			HCO ₃ ⁻	220	3,61	89,03
Fe	< 0,05	0,00	0,00	CO ₃ ²⁻			
Mn	0,02	0,00	0,02	PO ₄ ³⁻	0,05	0,00	0,04
				S ²⁻	-		
Sum Cations	70,82	4,13	100,00	Sum Anions	244,93	4,05	100,00
Total cations and anions: 316 mg/l				Spec. el. cond. 20°C 380 µS/cm			
Metaboric acid [HBO ₂]	-	Bmg/l		pH		5,3	
Metasilicic acid [H ₂ SiO ₃]	-	mg/l		pH _{poise}			
Aluminium [Al]	-	µg/l		Corrosion index:		-	
Antimony [Sb]	-	µg/l		M-alkalinity		3,6	mmol/l
Arsenic [As]	-	µg/l		P-alkalinity			mmol/l
Barium [Ba]	-	µg/l		Total hardness		104	CaO mg/l
Zinc [Zn]	-	µg/l		Carbonate hardness		101	CaO mg/l
Mercury [Hg]	-	µg/l		Non-carbonate hardness		3	CaO mg/l
Cadmium [Cd]	-	µg/l		COD _{KMnO4/ac}		0,48	O ₂ mg/l
Chromium [Cr]	-	µg/l		Dry residues in 105°C		-	mg/l
Nickel [Ni]	-	µg/l		Dry residues in 180°C		-	mg/l
Lead [Pb]	-	µg/l		Dry residues in 260°C		-	mg/l
Copper [Cu]	-	µg/l		Total dissolved material		-	mg/l
Selenium [Se]	-	µg/l		TOC		-	mg/l
Cobalt [Co]	-	µg/l		Total phosphorus		-	Pmg/l
Molybdenum [Mo]	-	µg/l		Phenol index		-	µg/l
				TPH-oil index (GRO+DRO)		-	µg/l
Free active chlorine [o]	-	mg/l		ANA detergent		-	mg/l
Total active chlorine [o]	-	mg/l		Cyanide (total)		-	µg/l
Combined active chlorine [o]	-	mg/l		Free carbonic acid [o]		-	mg/l
Chlorite	-	mg/l		Dissolved oxygen [o]		-	mg/l
Chlorate	-	mg/l		Turbidity		-	NTU
Bromate	-	µg/l		Suspended Solids		-	mg/l
Bromoform	-	µg/l		Temperature [o]		-	°C
Ozone	-	µg/l		Nitrate/50+ nitrite/3		0,40	

Physical characteristics: Colourless, clear.

Comments: [-] non tested component [o] onsite


From the tested compounds view the water sample according to the requirements of "Government Decree No. 201/2001. (X.25.) Korm. about the drinking water quality" is

[no mark]: suitable as "drinking water".


[*]: "non drinking water".

[+]: "criticised drinking water"

[o]: "if the water comes from the non protected layer, criticised drinking water".


 Head of Department

20/05/2019, Budapest



 Head of Laboratory



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ANALYTICAL METHODS

Components	Method	Components	Method
Na ⁺	MSZ 1484-3:2006 6. f.	NO ₃ ⁻	MSZ 1484-13:2009 5.2.sz. / EPA Method 300.1-1:1999 / MSZ EN ISO 10304-1:2009
K ⁺	MSZ 1484-3:2006 6. f.	NO ₂ ⁻	MSZ 1484-13:2009 6.2.sz. / EPA Method 300.1-1:1999 / MSZ EN ISO 10304-1:2009
Li ⁺	MSZ 1484-3:2006 6. f.	Cl ⁻	EPA Method 300.1-1:1999 / MSZ EN ISO 10304-1:2009
NH ₄ ⁺	MSZ ISO 7150-1:1992	Br ⁻	EPA Method 300.1-1:1999 / MSZ EN ISO 10304-1:2009
Ca ²⁺	MSZ 1484-3:2006 6. f.	I ⁻	MSZ EN ISO 10304-3:1999
Mg ²⁺	MSZ 1484-3:2006 6. f.	F ⁻	EPA Method 300.1-1:1999 / MSZ EN ISO 10304-1:2009
Fe ³⁺	MSZ 1484-3:2006 6. f.	SO ₄ ²⁻	EPA Method 300.1-1:1999 / MSZ EN ISO 10304-1:2009
Mn ²⁺	MSZ 1484-3:2006 6. f.	HCO ₃ ⁻	MSZ 448-11:1986 6.2.sz.
		CO ₃ ²⁻	MSZ 448-11:1986 6.2.sz.
		o.PO ₄ ³⁻	MSZ EN ISO 6878:2004 4.f. / EPA Method 300.1-1:1999 / MSZ EN ISO 10304-1:2009
		S ²⁻	MSZ 448-14:1990 3.f.
Smell, taste	MSZ EN 1622:2007 C.mell.	pH	MSZ 1484-22:2009 8.1.szakasz
Colour	MSZ EN ISO 7887:1998 2.f.(vsz)	m-alkalinity	MSZ 448-11:1986
Free CO ₂	MSZ 448-23:1983 2.f.	p-alkalinity	MSZ 448-11:1986
Fixed CO ₂	MSZ EN ISO 7027:2000 6.f. (vsz)	Total hardness	MSZ 448-21:1986 Függelék 4.f., 5.f.
TOC	MSZ EN 1484:1998	Carb. hardness	MSZ 448-21:1986 4.f.
HBO ₂	MSZ 10889-2:1981	Non-carb. hard.	MSZ 448-21:1986 5.f.
H ₂ SiO ₃	MSZ 448-26:1991 5.f.	Spec. el. cond.	MSZ EN 27888:1998
Cyanide (total)	MSZ 260-30:1992 4.1.-4.6. szakasz	COD _{KMnO4/ac}	MSZ 448-20:1990
Phenol	MSZ 1484-1:2009 3.f., 4.f.	COD _{Cr}	ISO 15705:2002
Anionic surf.	MSZ 448-49:1981	Dry residues	MSZ 448-19:1986
Total P	MSZ EN ISO 6878:2004 7.f.	Floating substance	MSZ 448-33:1985
Org. N	MSZ 448-27:1985 5.2.2.sz. 6f., MSZ ISO 7150-1:1992	Temperature	MSZ 448-2:1967 1.f. (vsz)
Cr (VI)	MSZ 260-32:1989 2.f.	Active chlorine	MSZ EN ISO 7393-2:2000
UV SZOE _{cyclohexane}	MSZ 12750-23:1976 4.f. (vsz)	Ozone	DIN 38408-G3-2:1993
Dissolved O	MSZ ISO 5813:1992 / MSZ EN 25814:1998 (vsz.)	Chlorite, chlorate	EPA Method 300.1-1:1999 / MSZ EN ISO 10304-4:2000
Turbidity	ASTM D1498:2014	Bromate	EPA Method 300.1-1:1999 / EN ISO 15061:2001
Aluminium	MSZ EN ISO 15586:2004	Chromium	MSZ EN ISO 15586:2004
Antimony	MSZ EN ISO 15586:2004	Molybdenum	MSZ EN ISO 15586:2004
Arsenic	MSZ EN ISO 15586:2004	Nickel	MSZ EN ISO 15586:2004
Barium	MSZ EN ISO 15586:2004	Lead	MSZ EN ISO 15586:2004
Zinc	MSZ 1484-3:2006 6. f.	Tin	MSZ EN ISO 15586:2004
Silver	MSZ EN ISO 15586:2004	Copper	MSZ 1484-3:2006 6. f.
Mercury	MSZ 1484-3:2006 9.f.	Strontium	MSZ EN ISO 15586:2004
Cadmium	MSZ EN ISO 15586:2004	Selenium	MSZ EN ISO 15586:2004
Cobalt	MSZ EN ISO 15586:2004	Vanadium	MSZ EN ISO 15586:2004
BTEX / GC-FID, -MS	MSZ EN ISO 17943:2016	CH ₄ , O ₂ , N ₂ , CO ₂	MSZ 448-43:1985
VOCl / GC-ECD, -MS	MSZ EN ISO 17943:2016	methane, ethane propane, butane, pentane, hexane	MSZ ISO 6974-3:2001
Oil index / GC	EPA 8015C / ASTM D6520:2000		

06.07.2018

[e_1.0]

(vsz) = withdrawn standard