

MINERAL WATERS OF COLORADO

NUMBER 143

HEYWOOD SPRING

Location—Bath House Spring, Mt. Princeton.

Rate of Flow—

Temperature—100° to 120° F.

Class of Water—Sodic, sulphated, bicarbonated, alkaline-saline (siliceous).

Constituents	Formula	Milligrams per liter Approximately parts per million	Reacting value percentage
Silica	SiO ₂	52.0	.....
Sulphate	SO ₄	51.24	19.04
Bicarbonate	HCO ₃	85.8	25.09
Carbonate	CO ₃	None	.....
Phosphate	PO ₄	None	.....
Chloride	Cl	11.78	5.87
Iron	Fe	.....	.....
Aluminum	Al	.....	.....
Iron oxide	Fe ₂ O ₃	} None	.....
Aluminum oxide	Al ₂ O ₃		
Manganese	Mn	None	.....
Calcium	Ca	8.96	8.01
Magnesium	Mg	Trace	.....
Potassium	K	5.5	2.49
Sodium	Na	51.0	39.50
Lithium	Li	None	.....
Total		266.28	100.00

Concentration value	5.62	Excess carbon dioxide.....	30.96
Hydrogen sulphide, H ₂ S....	None	Iron precipitated	None
Arsenic, As .....	.....	Evaporation solids	225
Strontium, Sr .....	.....	Oxygen consuming capacity	0.7

Hypothetical Combinations

Milligrams per liter, approximately parts per million

Lith. chlor., LiCl.....	.....	Calc. bicarb., Ca(HCO ₃) ₂ ...	36.22
Pot. chlor., KCl.....	10.49	Iron and aluminum oxides, Fe ₂ O ₃ , Al ₂ O ₃ .....	.....
Sod. chlor., NaCl.....	11.19	Calc. silicate, CaSiO ₃.....	.....
Sod. sulph., Na ₂ SO ₄	75.77	Silica, SiO ₂	52.0
Mag. sulph., MgSO ₄.....	.....	Mang. oxide, Mn ₂ O ₄.....	.....
Calc. sulph., CaSO ₄.....	.....	Mag. bicarb., Mg(HCO ₃) ₂ ...	Trace
Calc. carb., CaCO ₃.....	.....	Sod. bicarb., NaHCO ₃	89.61
Ferrous bicarb., Fe(HCO ₃) ₂ .....	.....	
Total			266.28

Properties of Reaction in Percent

Primary salinity	49.82	Primary alkalinity	31.16
Secondary salinity .....	.....	Secondary alkalinity	16.02
Tertiary salinity .....	.....	Tertiary alkalinity .....	.....

Location—At lower end
Rate of Flow—250 to 300
Class of Water—Sodic,
(siliceous).

Constituents

Silica
Sulphate
Bicarbonate
Carbonate
Phosphate
Chloride
Iron
Aluminum
Iron oxide
Aluminum oxide
Manganese
Calcium
Magnesium
Potassium
Sodium
Lithium

Concentration value
Hydrogen sulphide, H₂S
Arsenic, As

Milligrams per

Lith. chlor., LiCl.....
Pot. chlor., KCl.....
Sod. chlor., NaCl.....
Sod. sulph., Na ₂ SO ₄ ...
Mag. sulph., MgSO ₄ ...
Calc. sulph., CaSO ₄ ...
Calc. carb., CaCO ₃ ...
Ferrous bicarb., Fe(HCO ₃) ₂

Total

Primary salinity ...
Secondary salinity ...
Tertiary salinity ...

Temperature—°C
Curies Ra Emanation
Mache Units per