Chabazite-Mg $(Mg_{0.7}K_{0.5}Ca_{0.5}Na_{0.1})[Al_3Si_9O_{24}]\cdot 10H_2O$

Crystal Data: Hexagonal. *Point Group*: $\bar{3}$ 2/*m*. As rhombohedra to 0.4 mm.

Physical Properties: *Cleavage*: None. *Fracture*: Uneven. *Tenacity*: Brittle. Hardness = ~4
D(meas.) = 1.98(1) D(calc.) = 1.964(7)

Optical Properties: Transparent. *Color*: Colorless. *Streak*: White. *Luster*: Strongly vitreous.
Optical Class: Uniaxial (+). ω = 1.465(5) ε = 1.469(5)

Cell Data: *Space Group*: $R\bar{3}$ *m*. *a* = 13.7773(8) *c* =14.8724(6) Z = 3

X-ray Powder Pattern: Prága Hill, Veszprém County, Balaton Highland, Transdanubia, Hungary.
4.315 (100), 2.924 (78), 9.306 (60), 2.869 (41), 5.537 (37), 4.958 (25), 2.483 (20)

Chemistry:

	(1)
SiO_2	56.0
Al_2O_3	16.9
Fe_2O_3	0.02
MgO	2.85
K_2O	2.5
CaO	2.8
Na_2O	0.27
SrO	0.3
BaO	0.02
H_2O	[18.30]
Total	99.96

(1) Prága Hill, Veszprém County, Balaton Highland, Transdanubia, Hungary; average electron microprobe analysis, H_2O calculated from structure analysis; corresponding to $(Mg_{0.67}K_{0.52}Ca_{0.48}Na_{0.08}Sr_{0.03})_{\Sigma=1.78}[(Al_{3.16}Si_{8.89})_{\Sigma=12.05}O_{24}]\cdot 9.68\ H_2O$.

Mineral Group: Zeolite group, chabazite series.

Occurrence: In cavities in basalt, formed by hydrothermal alteration of feldspar and volcanic glass in a closed system with Mg-rich solutions.

Association: Saponite, aragonite, phillipsite.

Distribution: From the Karikás-tető area of Prága Hill, Veszprém County, Balaton Highland, Transdanubia, western Hungary. From the Ugione Valley, Monti Livornesi, Livorno, Tuscany, Italy.

Name: From the Greek *chabazios*, an ancient name of a stone. A suffix indicates the most abundant extra-framework cation. Chabazite is the correct name for a member of the chabazite series that is not specifically identified on compositional grounds.

Type Material: Department of Mineralogy and Petrology, Hungarian Natural History Museum, Budapest (Gyn./1742, 1743), and the Herman Ottó Museum, Miskolc, Hungary (2009.51.1).

References: (1) Montagna, G., S. Bigi, P. Kónya, S. Szakáll, and G. Vezzalini (2010) Chabazite-Mg: a new natural zeolite of the chabazite series. Amer. Mineral., 95, 939-945.
(2) Biagioni, C. (2020) A new occurrence of a Mg-rich member of the chabazite series from Tuscany (Italy). Atti della Societa Toscana di Scienze Naturali, Mem., Ser. A, 127, 61-66.
(3) Coombs, D.S., A. Alberti, T. Armbruster, G. Artioli, C. Colella, E. Galli, J.D. Grice, F. Liebau, J.A. Mandarino, H. Minato, E.H. Nickel, E. Passaglia, D.R. Peacor, S. Quartieri, R. Rinaldi, M. Ross, R.A. Sheppard, E. Tillmanns, and G. Vezzalini, (1998) Recommended nomenclature for zeolite minerals: Report of the Subcommittee on Zeolites of the International Mineralogical Association, Commission on New Mineral and Mineral Names. Mineral. Mag., 62, 533-571.