

# Dar al Gani 1042

## Anorthositic regolith breccia

801 g

*Photo of Dar al Gani 1042 not yet available*

### **Introduction**

Dar al Gani (DaG) 1042 was found in the Dar al Gani region near Al Jufrah, Libya in 1999 (Connolly et al., 2007). The 801 g stone is partially fusion crusted, and has feldspathic clasts in a fine grained well lithified matrix. Terrestrial calcites pervasively occur along cracks.

### **Petrography, mineralogy, and chemistry**

DaG 1042 is an anorthositic or feldspathic regolith breccia with “typical lunar highland breccia clasts (with feldspathic crystalline melt breccias, granulitic lithologies, cataclastic anorthosites) embedded in a well-lithified matrix” (Connolly et al., 2007). Granulitic clasts consist of dominant plagioclase ( $An_{95.4-96.7}$ ) with orthopyroxene ( $Wo_3Fs_{19}En_{78}$ ,  $Fe\# = 0.19$ ), clinopyroxene ( $Wo_{8-12}Fs_{26-28}En_{62-64}$ ,  $Fe\# = 0.28-0.30$ ;  $Wo_{44}Fs_9En_{47}$ ,  $Fe\# = 0.15-0.16$ ), olivine ( $Fo_{65-69,81-84}$ ), ilmenite, and Ti-rich chromite ( $Chr_{45}Hc_{19}Usp_{36}$ ). Isolated mineral fragments are plagioclase, co-existing augite and pigeonite, and olivine with ranges of compositions similar to those in the above clasts. Anorthositic impact glasses occur both as glass veins and spherules (see Connolly et al., 2007).

### **Radiogenic age dating**

None yet reported.

### **Cosmogenic isotopes and exposure ages**

None yet reported.