1147-13-454 **Ana Garcia Elsener**, **Philipp Lampe** and **Daniel Smertnig*** (dsmertni@uwaterloo.ca).

Class groups of cluster algebras.

Cluster algebras were introduced by Fomin and Zelevinsky in 2002. They are defined in terms of combinatorial data, specifically a quiver together with a mutation process. (Locally) acyclic cluster algebras are Krull domains, and as such their factorization theory is governed by their class group. We show that this class group is always a finitely generated free abelian group of rank r, that every class contains infinitely many prime divisors, and that r can be determined explicitly in terms of the initial combinatorial data. In particular, this yields a classification of factoriality for cluster algebras of (extended) Dynkin type, extending earlier results in this direction. (Received January 24, 2019)