1042-55-137   **Larry Smith*** (`larry_smith@gmx.net`), Mittelweg 3, D 37133 Friedland, Germany, and **R. E. Stong**. *Poincar'e Duality Algebras Module Two.*

In this note we study Poincaré duality algebras over the field $\mathbb{F}_2$ of two elements. We obtain a complete classification of surfaces, i.e., Poincaré duality algebras of formal dimension two. To do so we determine the Grothendieck group of standardly graded surface algebras over an arbitrary field under the operation of connected sum. This group turns out to be finitely generated and mirrors faithfully the topological classification of closed surfaces. By contrast, for Poincaré duality algebras (standardly graded or not) of formal dimension strictly greater than two the Grothendieck group fails to be finitely generated. (Received August 16, 2008)