

Table 1. Dimensions of representative *Brassica rapa* and *Arabidopsis thaliana* siliques used in these experiments.

| | <i>Arabidopsis</i> | <i>Brassica</i> |
|---|--------------------|-----------------|
| Silique length (mm) | 13 | 30 |
| Silique diameter (mm) | 1 | 3 |
| Measured gas volume ^a (mL) | 0.0073 | 0.110 |
| Calculated gas volume ^b (mL) | 0.010 | 0.141 |
| Calculated surface area ^b (mm ²) | 41 | 188 |

Note: Because *Brassica* requires cross-pollination to initiate seed set, it was unsuitable for the experiments on reproductive development, and therefore the latter were performed inside low-oxygen chambers with *Arabidopsis* (see Figs. 1–6).

^aDetermined using a pycnometer.

^bBased on a cylindrical shape with the length of the silique locule and the diameter of the silique.