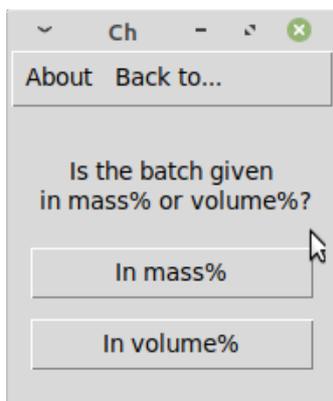
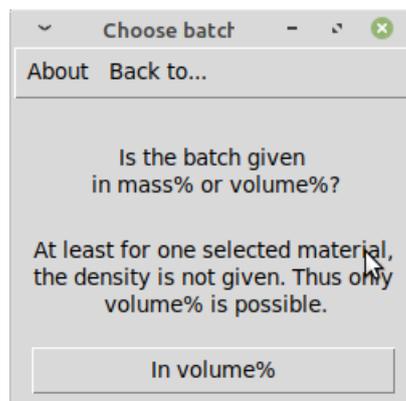


## Batch definition

Depending on the saved properties of the selected raw materials—namely if the true density for all chosen materials is given—the batch can be defined either in vol% and wt% or only in vol%. The software checks this circumstance beforehand (cf. Figure 1).



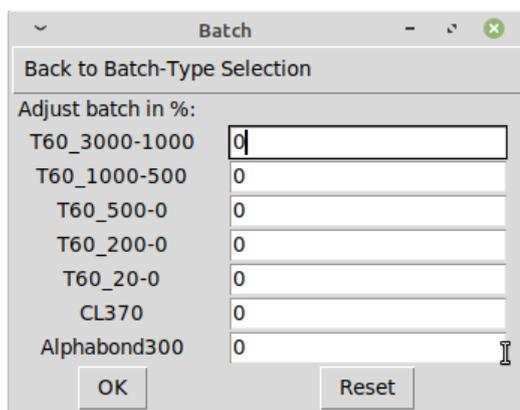
(a) Window in case of given densities



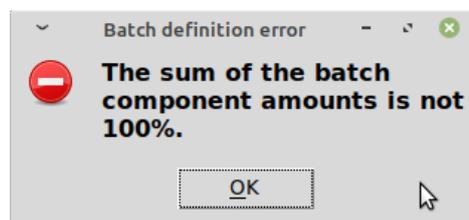
(b) Window in case not all densities are saved

Figure 1: Different dialogs depending on whether true densities are given for all raw materials

The reason that calculations in wt% (including batches in wt%) are only possible if the true densities for the raw materials are given is that the particle size distributions saved in the database or recipe files are in vol% and furthermore are considered to be of a true density independent on the particle size for the single raw materials. A composition by volume is thus always possible, but the weight fractions differ by the respective densities. Hence, to calculate in wt%, the true densities for all raw materials to be included in the batch are required. If not given during addition of a raw material to a database, the true density can always be added by using the 'Edit material in an existent database' function accessible from the Main window menu of the ParSD software.



(a) Input batch composition



(b) Error message if batch  $\neq$  100 %

Figure 2: Batch composition

After choosing for the batch type (vol% or wt%), the batch has to be composed (Figure 2(a)) and the software checks if the batch adds up to 100 % (Figure 2(b)). Caution: In the present version of the software it is not checked, if for all materials a value was given at all although this is required by the software. If you accidentally added more materials than required, you might define their share as 0 %.