Purity analysis

Purity is an expression of how ‘clean’ the seed lot is.

ISTA (2005) specifies a pure seed faction to contain: (i) intact seeds of actual species as well as dead, shrivelled, diseased, immature and pre-germinated seeds; (ii) achenes and similar fruits, such as samara with or without perianth regardless of whether they contain a true seed, unless it is apparent that none is contained; and (iii) fractions of broken seeds, achenes, etc, hat are more than half of the original size.

Information on actual seed lot composition is important; purity analysis serves as a guideline to determine the necessity of further cleaning. During purity analysis, each ‘pure’ seed fraction from the working sample is separated from the inert matter and other seeds.

- Weigh out a working sample of given weight (for example 250 g) of the total seed lot randomly using an electronic balance.

- Spread the sample on table and separate out all pure seeds manually with tweezers or remove impurities by blowing, sifting or letting seeds roll down a slanting surface.

- Weigh the ‘pure’ seed fraction and express purity as the percentage weight of pure seed over the total weight of the working sample, as shown below.

$$\textit{Purity (\%)} = \frac{\textit{Weight of pure seeds (g)} \times 100}{\textit{Total weight of working sample (g)}}$$