

Figure 13.3. Calli of grape cultures. The plate on the left contains an unselected culture in which a few cells make high levels of reddish-purple pigments (anthocyanins). The plate on the right contains highly selected cultures in which most cells make pigment.

Typical media use a carbon/energy source such as sucrose. Inorganic nutrients, vitamins, and “hormones” (or growth regulators) are included in media. Classes of plant hormones that are growth promoters are auxins, cytokinins, and gibberellins. Most media contain at least an auxin such as naphthalene acetic acid (NAA) or 2,4-Dichlorophenoxyacetic acid (2,4-D) and a cytokinin such as kinetin or benzyladenine (BA). Ethylene is a plant hormone and is typically produced by the culture itself.

The establishment of *suspension cultures* (see Fig. 13.4) from callus is generally straightforward if the callus is *friable* (easily breaks into small pieces). A piece of callus is

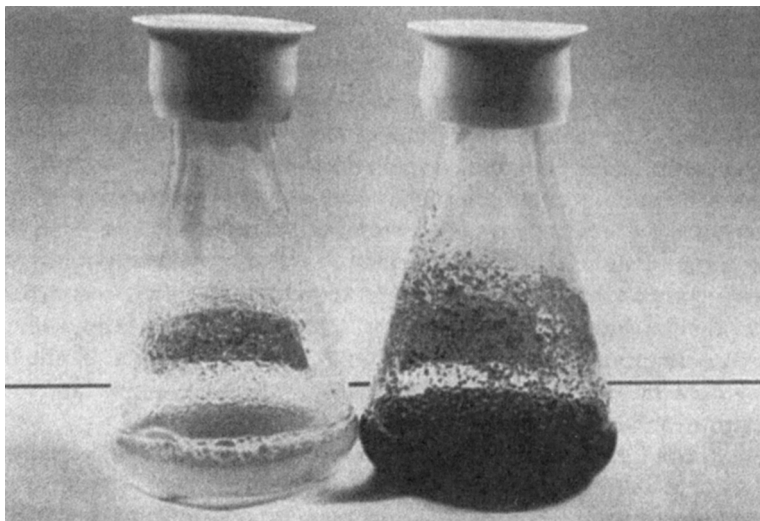


Figure 13.4. Suspension cultures of grape cells. The flask on the left is a culture with modest selection, while the culture on the right is highly selected for anthocyanin production.