

Phloem sap. **Phloem sap** (pronounced /'floʊɛm/) consists primarily of sugars, hormones, and mineral elements dissolved in water. It flows from where carbohydrates are produced or stored (sugar source) to where they are used (sugar sinks). The pressure flow hypothesis proposes a mechanism for **phloem sap** transport.

Phloem Sap Composition:

The major phloem sap components are carbohydrates. Analyses of the phloem exudates from various plants have shown that sucrose is the major transportable form of carbohydrate. In some species of Cucurbitaceae, in addition to sucrose, certain oligosaccharides like raffinose, stachyose, and verbascose have also been found in the phloem sap composition.

The phloem sap also contains high levels of K^+ and Mg^{2+} . Among the anions Cl^- and PO_4^{3-} are very common. Traces of zinc, manganese, copper, iron and molybdenum are also present.

Probably, due to its high K^+ content the phloem exudate is slightly alkaline.

All these proteins are called sieve tube exudate proteins (STEPs).

Besides this alkaloids are present.

Phloem (pronunciation:) is the living tissue in vascular plants that transports the soluble organic compounds made during photosynthesis and known as photosynthates, in particular the sugar sucrose, to parts of the plant where needed. This transport process is called translocation. In trees, the phloem is the innermost layer of the bark, hence the name, derived from the Greek word φλοιός (phloios) meaning "bark". The term was introduced by Carl Nägeli in 1858.

References:

<https://en.m.wikipedia.org>