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## Scientific Recommendation for the Consumption of Micronized *Leptocarpha rivularis* in Capsules

The chemical structure of a polyphenol determines its absorption rate, as well as the extent and nature of the metabolites that circulate in plasma. Due to the general molecular structure of polyphenols, their absorption is generally rapid in their free form, owing to their lipophilic properties, which allow them to cross plasma membranes by simple diffusion (Gambini et al., 2021), and to be absorbed mainly through the gastric route, particularly when administered as a formulated product rather than as the natural raw material itself (Ariza et al., 2018).

In general, polyphenols are absorbed within 1–2 hours and reach plasma concentrations of approximately 1  $\mu\text{M}$  when consumed as part of the diet (Aziz et al., 1998). Due to the short half-life of these compounds in the human body—resulting from their rapid absorption, metabolism, and excretion (Strømsnes et al., 2021)—the literature reports the use of dosing regimens of three administrations per day (Ryan Wolf et al., 2017; Poulsen et al., 2013) for various polyphenolic compounds. This strategy aims to divide the total daily dose into three separate intakes in order to maintain a more stable plasma concentration of the polyphenol, avoiding high peaks following a single large dose and the rapid declines that occur as a consequence of accelerated hepatic metabolism.

### References

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