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The ellagitannin HeT induces electrolyte leakage, calcium influx and the accumulation of nitric oxide and hydrogen peroxide in strawberry

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Abbreviation: HeT, ellagitanin (1-*O*-galloyl-2,3;4,6-bis-hexahydroxydiphenoyl- β -D-glucopyranose); H2DCF-DA, 2',7'-dichlorodihydrofluorescein diacetate; DAF-FM-DA, 4-amino-5-methylamino-20,70-difluorofluorescein diacetate; diSC3-5, 3,30-dipropylthiobarbiturate iodide; MES, 2-(*N*-morpholino) ethanesulfonic acid; EC, electric conductivity; NO, Nitric oxide; s, seconds; min, minutes; h, hour; hpt, hours post treatment; cPTIO, 2-4-carboxyphenyl-4,4,5,5-tetramethylimidazole-1-oxyl-3-oxide; AOX, alternative oxidase capacity; NOXs, NADPH oxidases; ROS, reactive oxygen species.

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Highlights

- HeT induces a rapid electrolyte leakage and hyperpolarization on strawberry cells
- HeT produces the Ca²⁺ influx which inhibits the nitric oxide accumulation
- HeT causes a biphasic accumulation of H₂O₂ and the AOX activation

Authors' contributions

The experimental design, data analysis and paper writing was carried out by GGM and JCDR. MPF and MA obtained HeT. JCDR and APC critically reviewed the paper.

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