In peaches, fruit flesh browns unattractively after peeling or cutting. A recently developed cultivar, Okayama PEH7, was distinct from other Japanese cultivars, including Okayama PEH8, with respect to its reduced browning potential. Homogenate prepared from Okayama PEH7 flesh had significantly less reddening during the browning reaction. Okayama PEH7 had less soluble phenolic compounds and higher polyphenol oxidase activity than Okayama PEH8. Reduced browning was observed even when phenols prepared from Okayama PEH7 were incubated with crude extract from Okayama PEH8, suggesting that phenols lower the browning potential of Okayama PEH7. In Okayama PEH7, contents of chlorogenic acid and its isomers were about one-tenth compared to Okayama PEH8. Exogenous addition of chlorogenic acid to Okayama PEH7 homogenate increased the browning potential and visibly enhanced reddening. These results indicate that the reduced browning of Okayama PEH7 flesh is due to a defect in chlorogenic acid accumulation.

Flesh homogenate of Okayama PEH7 had less reddening during the browning reaction owing to a defect in chlorogenic acid accumulation.