

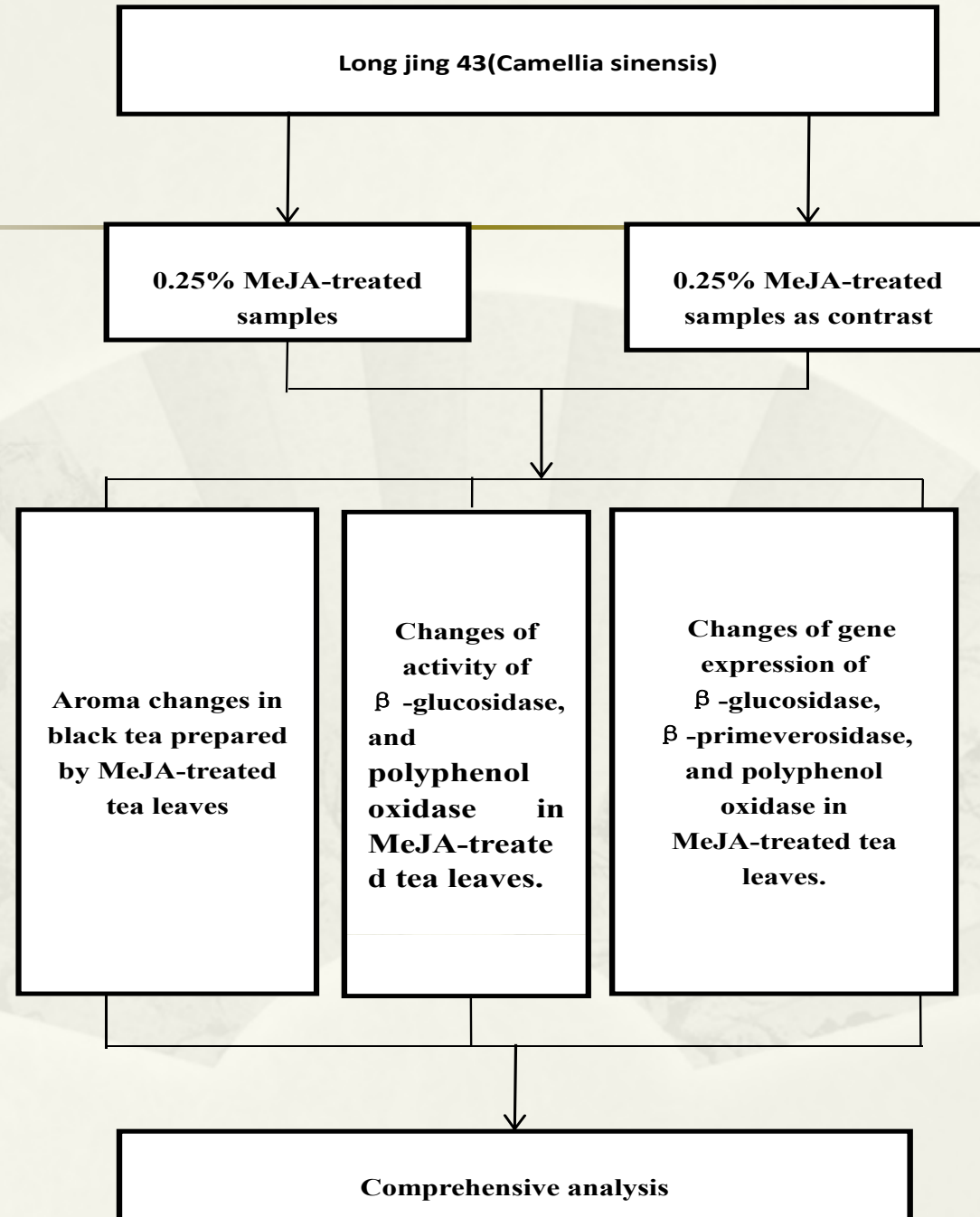


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Aroma changes of black tea prepared from methyl jasmonate treated tea plants

Key words: Aroma, Black tea, MeJA, HS-SPME, GC-MS, GC-O, Gene expression

Method



Results

- * Forty-five volatile compounds were identified through HS-SPME-GC-MS.
- * The results revealed higher levels of terpene alcohols and hexenyl ester in addition to several 3 newly induced components, including copaene, cubenol and indole, in the MeJA-treated black tea compared with untreated teas.

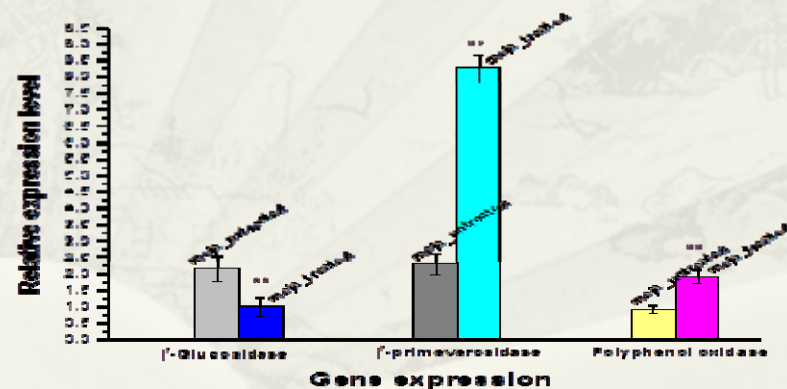
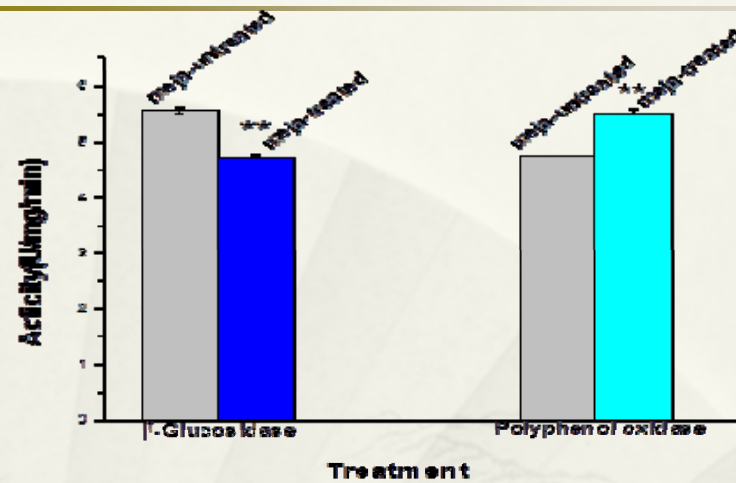
Results

Quality improvement in made black tea prepared with MeJA-treated tea leaves

Tea samples	Treatments	Remarks	Score
Black Tea	MeJA-untreated (CK)	Sweet aroma	88.7 ± 0.5
	MeJA-treated	Honey-sweet aroma	91.7 ± 1.5*

Results

- * Two enzyme activities changed after the MeJA treatment.
- * Expression of three genes also changed after treatment.



Conclusion

- * MeJA could affect the expression of certain genes that modulate the relevant enzyme activity, resulting in increased free terpene alcohol aromas.
- * The sensory quality of tea aroma was clearly improved.
- * This study could provide a theoretical basis and technical support for using an exogenous inducer to enhance aroma quality and developing a new flavored black tea..