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BEWIT.LOVE, SHARE.LOVE



# GC ANALYSIS REPORT

## DESCRIPTION / POPIS

NAME / NÁZEV	INCI NAME	CAS-No
Clove	<i>Caryophyllus Aromaticus Oil</i>	8000-34-8

## SPECIFICATION / SPECIFIKACE

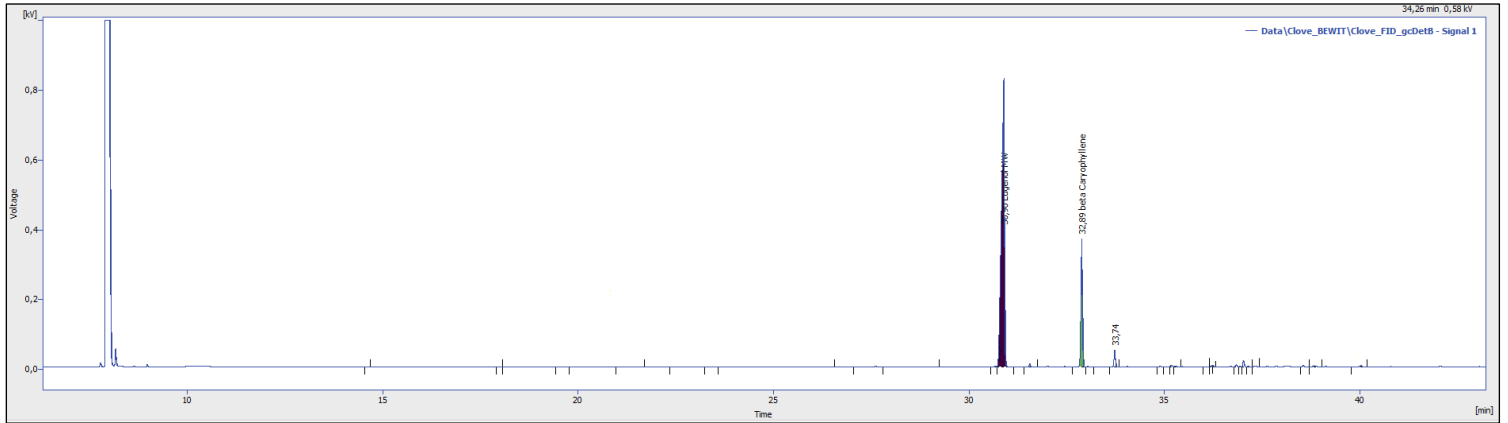
ORIGIN / PŮVOD	COLOUR / BARVA	ODOUR / VŮNĚ, ZÁPACH
India	Clear	Characteristic

APPEARANCE / VZHLED	SOURCE / ZDROJ	PRODUCTION / VÝROBA
Clear liquid	Buds, leaves	Steam distilled

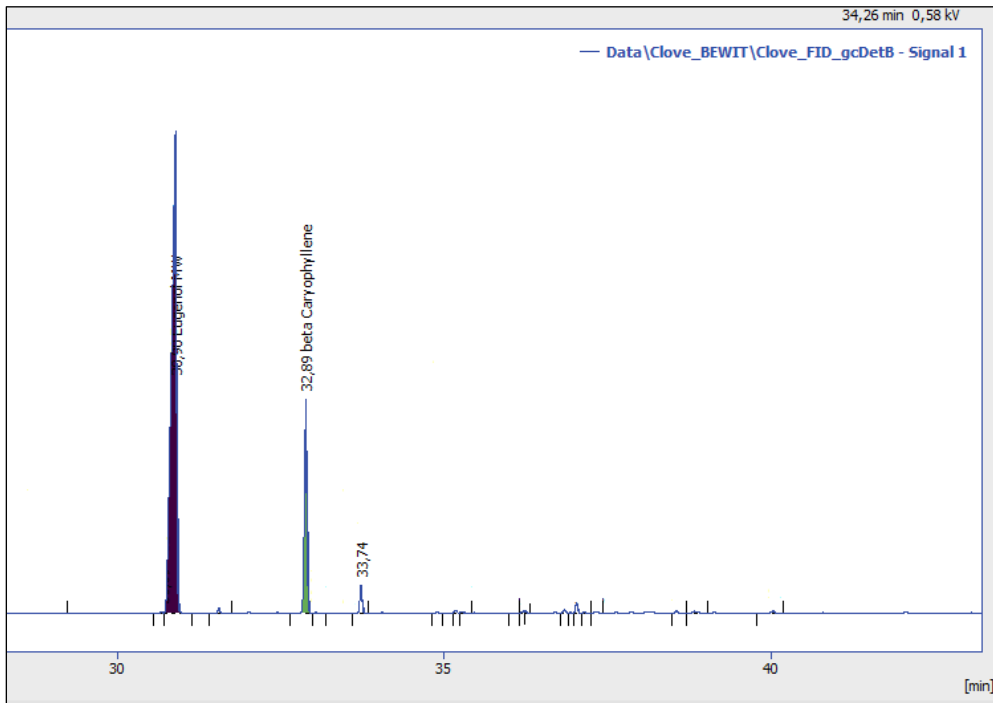
## COMPONENTS / SLOŽKY

COMPOUND / SLOUČENINA	RELATIVE CONTENT / OBSAH [%]	RETENTION TIME / RETENČNÍ ČAS
Eugenol	76,9	30,90
$\beta$ -Caryophyllene	17,3	32,89

Picture 1. – Clove chromatogram (solvent used in the analysis, major representation of peaks)



Picture 2. – Clove chromatogram (major representation of peaks without solvent)



- Comparison, scientific studies

Picture 3. – Chemical composition of essential oil of Clove [1]

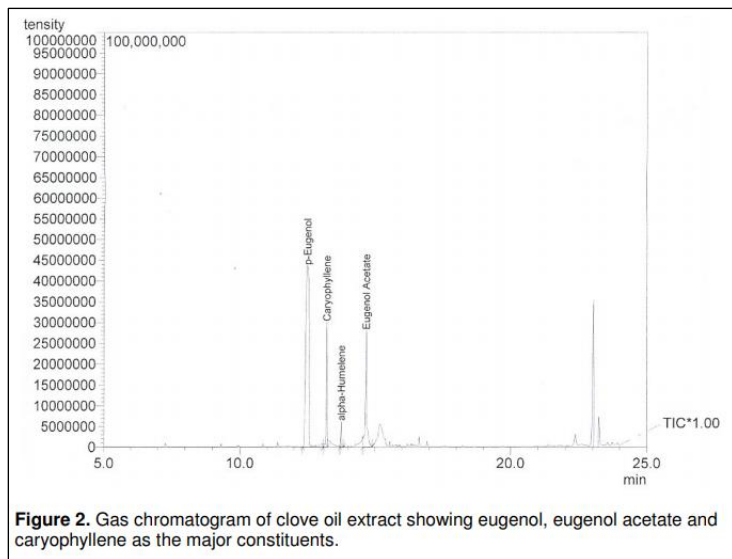


Figure 2. Gas chromatogram of clove oil extract showing eugenol, eugenol acetate and caryophyllene as the major constituents.

[1] LEE, Seongwei, Musa NAJIAH, Wee WENDY a Musa NADIRAH. Chemical composition and antimicrobial activity of the essential oil of *Syzygium aromaticum* flower bud (Clove) against fish systemic bacteria isolated from aquaculture sites. *Frontiers of Agriculture in China* [online]. 2009, **3**(3), 332-336 [cit. 2020-04-09]. DOI: 10.1007/s11703-009-0052-8. ISSN 1673-7334. Dostupné z: <http://link.springer.com/10.1007/s11703-009-0052-8>.

Picture 4. – Chemical composition of essential oil of Clove [2]

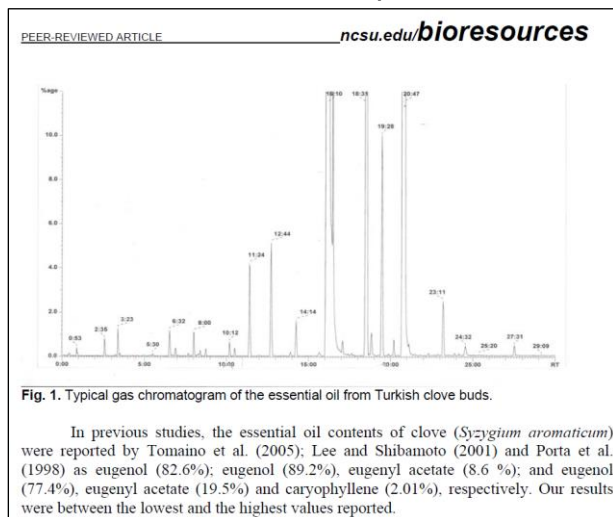


Fig. 1. Typical gas chromatogram of the essential oil from Turkish clove buds.

In previous studies, the essential oil contents of clove (*Syzygium aromaticum*) were reported by Tomaino et al. (2005); Lee and Shibamoto (2001) and Porta et al. (1998) as eugenol (82.6%); eugenol (89.2%), eugenyl acetate (8.6 %); and eugenol (77.4%), eugenyl acetate (19.5%) and caryophyllene (2.01%), respectively. Our results were between the lowest and the highest values reported.

[2] Mehmet, Alma & Ertas, Murat & Nitz, Siegfrie & Kollmannsberger, Hubert. (2007). Chemical composition and content of essential oil from the bud of cultivated Turkish clove (*Syzygium aromaticum* L.). *BioResources*. 2.

[3] PINO, Jorge A., Rolando MARBOT, Juan AGÜERO a Victor FUENTES. Essential Oil from Buds and Leaves of Clove ( *Syzygium aromaticum* (L.) Merr. et Perry) Grown in Cuba. *Journal of Essential Oil Research* [online]. 2001, **13**(4), 278-279 [cit. 2020-04-09]. DOI: 10.1080/10412905.2001.9699693. ISSN 1041-2905. Dostupné z: <http://www.tandfonline.com/doi/abs/10.1080/10412905.2001.9699693>