

Composition and antimicrobial activity of the essential oil and water extract from Japanese wild *Rosa rugosa* ~Fundamental study on the effective use to cosmetology~

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The essential oils and distilled-water extracts of *Rosa rugosa* flower, leaf, and fruit were analyzed by flame ionization detector-gas chromatography and mass spectrometer-gas chromatography. The principle components in the flower oil and water were citronellyl acetate, citronellol, and geranyl acetate, and citronellol and geraniol, respectively. For the leaf oil and water, it was γ -muurolene and geraniol and linalool, respectively. The main component in fruit water was terpinen-4-ol. Fruit oil, on the other hand, could not be extracted. Additionally, combining the *Rosa rugosa* distilled-water with one of the isoprenoids geraniol, farnesol, or citral showed higher antibacterial activity than the isoprenoid alone.