산초유의 식품유해미생물, 피부사상균, 식물병원균에 대한 항균활성과 항산화활성

김학곤[1*], 강승미[1], 용성현[2], 양우형[2], 박준호[1], 유찬열[1], 최명석[2]
([1]경남산림환경연구원, [2]경상대학교 산림자원학과)

Antimicrobial activity against foodborne pathogenic microorganisms, dermatophytes, and plant pathogens and antioxidative activity of Sancho oil

Hak Gon Kim[1*], Seung Mi Kang[1], Seong Hyeon Yong[2], Woo Hyeong Yang[2], Jun Ho Park[1], Chan Yeol Yu[1], Myung Suk Choi[2]
([1]Forest Research Department, Gyeongsangnam-do Forest Environment Research Institute, [2]Department of forest resources, Gyeongsang National University)

요약: 산초(*Zanthoxylum schinifolium* Siebold & Zucc) 기름은 전통적 식용유이지만 식용 외 이용법은 연구되어 있지 않다. Sancho oil의 식품유해 미생물, 피부사상균, 식물병원균에 대한 항균활성과 항산화 활성을 조사하였다. 식물위해 미생물 중에 가장 강한 항균활성을 보인 미생물은 저온에서 균이 증식하여 식중독을 유발하는 리스터리아균으로 나타났다. Sancho oil의 식물병원균 9종에 대한 항균활성을 검정한 결과 *Fusarium* 속에 대한 항균활성을 가지고 있는 것으로 나타났다. Sancho oil의 피부사상균에 대한 항균활성을 검정한 결과 *Trichophyton rubrum , Microsporum canis, Candida albicans*에 대한 약한 항균력을 가지는 것으로 나타났다. Sancho oil은 DPPH에 의한 free redical 소거능이 뛰어났으며, 지역별로 생산된 sancho oil의 항산화활성도 차이가 있었다. 이상의 결과로 보아 식물 병원균 등 항균제 개발 및 화장품 원료나 연고류의 소재로 활용할 수 있는 것으로 사료된다.

Abstract: Sancho(*Zanthoxylum schinifolium* Siebold & Zucc) oil is a traditional edible oil, but the use of edible oil has not been studied. Antimicrobial activity and antioxidative activity of Sancho oil on foodborne pathogenic microorganisms, dermatophytes and plant pathogens were investigated. Microorganisms showing the strongest antimicrobial activity among the microorganisms for the plants appeared to be *Listeria* spp. The antimicrobial activity of the nine plant pathogens of Sancho oil was tested and found to have antimicrobial activity against *Fusarium* spp. The antimicrobial activity of Sancho oil against dermatophytes was found to be weak against *Trichophyton rubrum*, *Microsporum canis* and *Candida albicans*. Sancho oil showed excellent free radical elimination by DPPH, and the antioxidant activity of sancho oil produced by region was also different. The antioxidant activity was determined to be dependent on the concentration of Sancho oil. Based on the above results, it is considered that it can be used as a material of cosmetic raw materials and ointments for the development of antimicrobial agents against plant pathogenic bacteria.

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