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### **Acute and 2 Weeks Repeated Irritation Study of Cutting oils**

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Cutting oils are complex mixtures of hydrocarbons, comprising of certain fractions of mineral oil, which are being frequently used as lubricating and heat transferring agents in various machine and tool industries. We investigated an acute and 2 weeks repeated irritation studies of two cutting oils (Cimperial 1010 as water-soluble cutting oil, and MSN 120 as insoluble cutting oil) using guinea pigs. In acute dermal irritation study, both cutting oils did not induce any local symptoms at the application site, and no pathological symptoms. However, repeated treatment induces erythema and edema at the application site from day 6. The stratum corneum was also thickened by 2-week treatment of both cutting oils. Because cutting oils are usually used repeatedly without protecting gloves and there were no symptoms from acute irritating study, we should consider long term irritation study when we evaluate the toxicity of cutting oils.