

P118. EVALUATION OF OCCUPATIONAL AND HOME ACCIDENTS CAUSED BY SULPHURIC ACID: TWO CASE REPORTS

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Sulfuric acid; with the formula H₂SO₄ is a powerful and highly corrosive chemical. It can corrode many different materials up to living tissues, metals and stones. This compound has a broad range of applications from plungers up to lead acid batteries. It is known as “battery acid” among the public. It transmits electric. Very high heat is produced when it is dissolved in water. It has also an important role in many industrial applications such as fertilizer production, petroleum refining, wastewater treatment, and chemical synthesis, dyestuff and explosives. However, it can be extremely irritating and dangerous. If swallowed or inhaled it can cause serious burns to the respiratory tract. In addition, it may cause severe burns in case of contact with skin or eyes.

Area in contact with the acid should be washed with eye shower or diluted base. Heat will be released if washed with water and this event will perform the main combustion. In this study it is intended to present two accident originated sulfuric acid burn cases and draw attention to measures that can be taken to prevent these types of accidents.

Case 1: From examining the legal and medical documents; it was understood that a 36-year-old male worker doing sink and kitchen cleaning at the day of the event, stated that he used a dust mask and dishwashing gloves during the application, but he has not taken any measures to protect the eye area, and his face and eyes were exposed to sulfuric acid steam during cleaning and partially to sulfuric acid itself which splashed directly to the face. In the examination of the patient in a private hospital he was taken to; intense edema in both eyelids and inflammation in the eye, skin erosion in the facial area and eyelids, intense epithelial damage in cornea and conjunctiva were detected. Eye and face shower with 0.9% NaCl was performed. He was taken under observation for three days, and discharged after medication.

Case 2: In the examination of judicial documents; it is determined that a 10 kg sulfuric acid in a plastik canister which was bought for cleaning the log and delivered to the doorman was set out to open space in the garden, that the canister had no warning letter on it. That the hands dirty children decided to wash their hands with the content of the canister, and that the 5 years old girl who poured the acid in her hands was taken to the hospital immediately because of the chemical skin burns. Blisters and severe painful red areas with widespread 2nd degree burns in both hands, wrists and palms were detected in the examination held in hospital. The patient was hospitalized in the pediatric surgery service and was discharged after medical treatment with medical follow-up recommendations.

The presented cases illustrates the importance of working with this type of abrasive chemicals in fume cupboards or in well ventilated areas, the use of protective clothing and goggles while working, and preservation of these substances in containers made of dark glass or in non reactive canisters labeled as irritant and corrosive substances in places not easy to access.