

Case involving worker poisoning while rinsing crystals with acetonitrile in a centrifugal separator



[Location of accident]

While rinsing crystals in a centrifugal separator as part of a drug production process

[Cause of accident]

The crystals produced in the reaction tank were transferred to a centrifugal separator, filtered, and rinsed with acetonitrile. When the rinsing proved insufficient, the decision was made to rub and rinse the crystals by hand in the centrifugal separator. The local ventilation duct of the centrifugal separator was removed because it interfered with the work. This resulted in inhalation exposure to acetonitrile vapor among the workers.

[Damage/injuries]

The next day, four workers engaged in the rubbing and rinsing of crystals complained of ill health and weakness. They went to the hospital and were diagnosed with acetonitrile poisoning.

Extract from [Preventive measures]

- [2] Check all hazards and dangers indicated on the MSDS (material safety data sheet) when performing a work involving the handling of hazardous substances. Provide the necessary protective gear and rigorously manage their use.



Riken Keiki Recommendations

Wearing personal PID monitors during work allows monitoring of exposure conditions and contributes to risk assessments of chemicals.