

The framework of the present paper was to evaluate the exposure to dust pollution and aerosols of the polyurethanes foam intended for the thermal insulation of refrigerators. Based upon the worker's complaints and investigations done in collaboration with occupational physicians; four testing stations were set up to evaluate the air quality at the gates injection (GI), tanks injection (TI), tank cleaning (TC), and the workshop atmosphere (WA). Two sampling techniques were used. The first was to use the rotary cup individual sensor flow dust of 10 l/min (CIP 10), with three fractions selectors; alveolar, thoracic and inhalable to evaluate the weight concentration. The second technique was using impregnated filters to sample and analyze the identified aerosols. For the samples taken in the (TC) station using the (CIP10), the results have shown that the air in the worker's breathing area contains 2.6 mg/m<sup>3</sup> for the alveolar fraction, 1.33 mg/m<sup>3</sup> for the thoracic fraction and 5.33 mg/m<sup>3</sup> for the inhalable fractions. In the (WA) station we have got 3.3 mg/m<sup>3</sup> for the alveolar fraction; 8.6 mg/m<sup>3</sup> for the thoracic fraction and 7.33 mg/m<sup>3</sup> for the inhalable fraction. The qualitative analysis of the aerosols through the filter sampling has confirmed the presence of the 4,4-Methylene diphenyl diisocyanate (4,4-MDI) in the workshop atmosphere. This research confirmed through the obtained results that operators are exposed permanently during their working hours to both pollutions dust and aerosols of 4,4-MDI