Analysis of the Concentration of Particles by Air Pollution due to the Port Activity in the Sector of the Bellamar Promenade in the District of San Antonio

Vergara, Stephania (School: Colegio Fenix)
Osorio, Valentina (School: Colegio Fenix)

Air pollution is caused by the release of chemical substances or plant residues that are emitted by various sources that release them into the environment. In Chile, the Chilean Air Quality Standard establishes that the particle concentration for PM 10 should be between 150 µg / m3N. San Antonio is mainly characterized by its port economic activity, and, in order to obtain air pollution data due to port activity, we worked in the area of Aerobiology, which studies all types of substance in the air. The aim of the research is to determine the particles concentration emitted by port activity in the air in the sector of the Bellamar promenade of San Antonio, which is located near a grain transport crane (Crane Panul). In order to obtain samples of the place, an artifact that resembles a Rotorod was made which is an instrument that is based on the impaction method to capture wind particles. The prevailing winds during the sampling came from south-southwest direction, with speeds of 10.34 ± 2.48 Km / h, the average concentration was of 10.58 ± 11.45 N / m-3. From the four sampling stations, the closest stations to Panul Crane found significant differences in the one-way Anova test (p = 0.00), so it is concluded that there is greater emission of particles in the vicinity of the Panul Crane in the stations was carried out the sampling.

Awards Won: