

Slovnaft Refinery

A Responsible Neighbour

Noise

The largest source of noise in large cities, including Bratislava, is usually traffic. However, loud noise is also made by factories, including the Slovnaft refinery. The sources of noise in the refinery are compressors, electric motors, pumps, regulatory valves and fans, which operate continuously, 24 hours a day. So Slovnaft systematically invests in reducing the noise to which its employees and the wider environment are exposed. Since 2011, this has been helped by a noise map, prepared by VÚRUP company for the Slovnaft complex. Data on the noise map are calculated based on the levels of individual noise sources in the production process and verified by real measured values taken at a height of 4m around the entire complex.

The permissible noise level in the plant's complex is 70 decibels (dB).

To protect health against noise in the environment, Ministry of Health decree lays down permissible noise levels, infrasound and vibration for day, evening and night. The area around the Slovnaft complex belongs to the 2nd category in which the following permissible levels apply:

Permissible noise levels by time period	
Daytime - 06:00 to 18:00	50 dB
Evenings - 18:00 to 22:00	50 dB
Night time - 22:00 to 06:00	45 dB

Inside the Slovnaft complex, the permissible noise level is 70 db. According to the noise map, the actual noise in the Slovnaft complex is between 44.2 dB and 60.3 dB.

What happens in the Slovnaft refinery if increased noise levels are detected?

Increased noise levels may occur during the following activities:

- shutdown/start-up of production units before/after repair
- non-standard situations
- formation of "decomposition", an undesired chemical reaction, due to non-standard
- situations e.g. standard safety depressurization of a technological device for the safe
- release of excessive gas pressure into the atmosphere through a safety membrane
- tightness tests through pressurizing

Planned activities that increase noise levels are only performed at the refinery from 06:00 to 20:00. Slovnaft informs all the surrounding districts of Ružinov, Vrakuňa and Podunajské Biskupice well in advance.

How does Slovnaft reduce noise levels?

Older Bratislavans living near Slovnaft still remember that it was even noisier than urban traffic in the past. Since then, refinery technology has changed and significantly contributes to reducing noise levels. Slovnaft has continued this trend with the construction of a new LDPE4 unit, which, as opposed to polyethylene production units, will significantly contribute to noise reduction accompanying decomposition. The introduction of the most modern emergency stop program for this production unit will reduce the risk of sudden unpleasant noise effects.

Examples of typical noise levels

The threshold of hearing for the human ear depends on a tone's frequency; for example, at 1 kHz, the hearing threshold in a healthy person is 0 dB. The pain threshold for the human ear is at noise levels measuring 130 db to 150 dB.

Indicative noise levels of some activities:



A key aim of the Slovnaft refinery is to minimise its impact on the life quality of the residents in its surroundings and to provide them with accurate information about its activities.

For any questions regarding noise, please contact us by phone: **+421 (2) 4055 7800** or electronically at **info@slovnaft.sk**



Slovnaft

MEMBER OF MOL GROUP