

Indoor Air Quality Assessment, Synopsys, Yerevan-Armenia

EDESSA was commissioned by **Synopsys, Armenia** to conduct an **Indoor Air Quality Assessment** within the Company's premises consisting of occupied offices consisting of 8,000 m² of open and partitioned space spread over 3 floors and mezzanines.

The Survey encompassed the study of the HVAC system and the actual air quality sampling. The results were compared to the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) Standard 55 - 2004 "Thermal Environmental Conditions for Human Occupancy" and the Canadian CSA Standard CAN/CSA Z412-00 - "Office Ergonomics".

The main parameters sampled during this survey were **Temperature, Relative Humidity, Carbon Monoxide, Carbon Dioxide, Volatile Organic Compounds (VOC), Particulate Matter (PM) and Microbials**.

Presence of molds, fungus, and bacteria was assessed through culture of the present pathogens. Sterilized petri dishes were prepared using specific agar gels for each pathogen (molds, bacteria, and fungus) then placed in previously chosen locations in order to cover as much space as possible. Main sampling locations included airflows from heating/cooling ducts and areas of high traffic in the building.

Air monitoring of the other parameters was done using a multi-parameter environmental monitor (EVM-7). This equipment allows the simultaneous sampling and analysis of temperature, relative humidity, carbon monoxide, carbon dioxide particulates and Total VOC and provides real-time results of the samples analyzed.

