

CASE STUDY: MEASUREMENTS OF RADIO FREQUENCY EXPOSURE FROM WI-FI DEVICES - INDUSTRY CANADA

Industry Canada has conducted an extensive series of tests to measure RF exposure from the use of Wi-Fi devices in a simulated classroom setting. The study confirms that the level of RF exposure is considerably below the limits for uncontrolled environments

The Industry Canada report states:

"For these measurements, the Wi-Fi access point 1 (AP1) was in a test mode that forced it to transmit continuously, while the Wi-Fi access point 2 (AP2) was in normal communication with all 24 laptops, which were all in downloading mode. With one of the Wi-Fi access points set to transmit continuously while test software was used, the measured RF levels were higher than they would be for the same device in normal operating mode.

Measurements were also conducted at one location with the laptops in different uploading or downloading modes, or both, to determine the variations in RF exposure levels. For these measurements, the laptops were connected to Wi-Fi AP2, operating at 2437 MHz. The highest average RF level obtained from among four different uploading and/or downloading configurations occurred when a single laptop was in downloading mode, as opposed to numerous laptops in uploading mode, downloading mode, or both.

At 20 cm from the Wi-Fi access points, the maximum instantaneous RF exposure levels obtained for Wi-Fi AP1 and Wi-Fi AP2 were 10.59% and 7.73% of the SC6 limits, respectively. For a typical scenario in which a person is located at several metres from the access point and surrounded by other users, the RF exposure level will be thousands of times below the SC6 limits.

Industry Canada found that the aggregated RF exposure levels are well below the SC6 limits at this indoor location. In addition, the Wi-Fi access points selected for this study were operating at higher power compared with most of the Wi-Fi devices currently available on the Canadian market. Therefore, the results of this study are likely higher than would typically be observed in equivalent setups in public and private environments."

[Click here for the Industry Canada WiFi report](#)