Apple and Samsung sued over phones' radiofrequency radiation

Suit cites Chicago Tribune investigation that tested devices

BY JOE MAHR

A group of lawyers has filed a federal class-action lawsuit against Apple and Samsung, citing a Tribune investigation that tested popular cellphones for radiofrequency radiation and found some results over the federal exposure limit.

The lawsuit — filed recently in California, Illinois and Iowa — alleges that the phone makers "intentionally misrepresented" the safety of their devices, assuring users that the phones had been adequately tested and "were safe to use on and in close proximity to their bodies."

The complaint, which alleges "negligence, breach of warranty, consumer fraud and unjust enrichment," seeks an unspecified amount of money and medical monitoring for anyone who bought an iPhone 7, iPhone 8, iPhone X, Galaxy S8, Galaxy S9 or Galaxy J3.

The Tribune commissioned tests of 11 models of cellphones made by four companies, including the six models mentioned in the suit. The newspaper stated that the intention was not to rank phone models for safety and noted it was not possible to say whether any of the devices tested could cause harm.

But the tests, conducted according to federal guidelines at an accredited lab, found that radiofrequency radiation from some models operating at full power measured over the exposure limit set by the Federal Communications Commission. The FCC said it would pursue its own testing after the agency reviewed the Tribune's lab reports.

Before any phone model can be brought to market, a sample must be tested for compliance with the exposure limit for radiofrequency radiation. In one phase of Tribune's testing, the phones were positioned at the same distance from a simulated human body as the manufacturers chose for their premarket tests — between 5 and 15 millimeters, depending on the model.

In this phase, all three Samsung phones tested measured under the safety limit. Results varied for Apple phones, but several iPhone 7s were tested and all results exceeded the limit.

The Tribune also tested all the phone models at a consistent and closer distance of 2 millimeters, to estimate the potential exposure for an owner using the phone in a pants or shirt pocket.

In that phase of testing, most of the models tested yielded results that were over the exposure limit, sometimes far exceeding it. At 2 millimeters, the results from the three Samsungs and several iPhone models — again, operating at full power — were higher than the standard.

Two days after the Tribune published its investigation, the lawsuit was filed in U.S. district court in San Jose, California, alleging that Apple and Samsung "market and sell some of the most popular smartphones in the world ... as emitting less RF radiation" than the legal limit.

The suit was filed by three firms with lawyers experienced with class-action lawsuits, including Chicago law firm Fegan Scott. One of its lawyers, Elizabeth Fegan, represents alleged victims of disgraced Hollywood mogul Harvey Weinstein and has worked on cases alleging that the NCAA mishandled student-athlete concussions and that the city of Chicago's work on water pipes has increased the risks of lead poisoning.

Representatives with Apple and Samsung did not return emails seeking comment.

Apple previously has disputed the Tribune's results, saying the lab used by the newspaper did not test the phones the same way it does. Apple and Samsung both have told the Tribune their phones comply with federal standards.

The lawsuit argues that recent research has shown radiofrequency radiation exposure "affects living organisms at levels well below most international and national guidelines."

"Thus," the suit claims, "defendants' design, manufacture, and sale of smartphones that far exceed federal guidelines exacerbates the health risks to Plaintiffs and the Classes."

High levels of radiofrequency radiation can heat biological tissue and cause harm. Less understood is whether people, especially children, are at risk for health effects from exposure to low levels over many years of cellphone use.

"Most studies of people published so far have not found a link between cellphone use and the development of tumors. However, these studies have had some important limitations that make them unlikely to end the controversy about whether cellphone use affects cancer risk," the American Cancer Society says on its website.

BRIAN CASSELLA/CHICAGO TRIBUNE

An Apple iPhone is tested for radiofrequency radiation last year at RF Exposure Lab in San Marcos, California.

Authorities in the 1990s set the federal exposure limit based solely on the heating risks of cellphone radiation, building in a 50-fold safety factor. But some researchers — and lawyers — have questioned whether the limit is safe enough.

In 2001, the debate spawned a lawsuit alleging that the standard didn't protect consumers and that phone makers, carriers and trade groups were liable for cancers that struck plaintiffs who'd used cellphones.

The courts later consolidated that suit, filed in the District of Columbia courts, with others making similar allegations.

In 2009, an appellate court dismissed claims about cellphones that met the federal standard but left open some claims of harm from phones that didn't meet the standard.

Since then, the courts have tied even more lawsuits to the case. Apple and Samsung are among the named defendants, along with other major phone manufacturers. The 18-year-old case has yet to go to trial as legal fights continue; lawyers are now battling the extent to which the plaintiffs' experts can scientifically link radiofrequency radiation to cancer.

The defendants have argued there's no link.

A plaintiffs' lawyer long involved with the case, Rudie Soileau, told the Tribune that the case has been "stuck in this procedural quagmire for years" and has yet to get to a point where he and his colleagues can access internal company documents on how the firms tested whether phones met the federal standard.

Fegan, the lawyer involved with the new lawsuit, said her group's argument focuses more on the marketing of the phones than links to poor health effects.

"We're not trying to prove any one individual's cancer or ill effects are from the phone," she said. "We're saying manufacturers, under consumer fraud laws, have a duty to tell the truth."

jmahr@chicagotribune.com
Twitter @JoeMahr

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FCC says tests find cellphones comply with federal limits on radiofrequency radiation

By Joe Mahr
Chicago Tribune

Responding to a Tribune investigation that found some popular cellphone models measured above federal limits for radiofrequency radiation, the Federal Communications Commission said this week that its own testing found all eight models it evaluated were in compliance.

The testing commissioned by the Tribune, conducted according to federal guidelines at an accredited laboratory in California, examined 11 cellphone models from four manufacturers. The phones were purchased new. Among other findings, the Tribune reported that all four Apple iPhone 7s tested yielded results exceeding the federal limit.

At the time, Apple disputed the results and said the lab used by the newspaper did not test the phones the same way it does.

For the FCC's tests, Apple provided the agency with two iPhone models that the Tribune tested, according to the FCC's report. The agency also said it collected from manufacturers "any necessary test software, RF cables, and other accessories required for testing the devices." Such software was unavailable to the Tribune's lab when testing Apple phones.

The agency's test of an iPhone 7 yielded a result roughly 40% below the federal limit for radiofrequency radiation.

The Tribune also had reported that an iPhone X, an iPhone 8 and a Moto e5 Play from Motorola measured above the limit under certain testing conditions.

In the FCC testing, results for the e5 Play and the iPhone X were under the limit, as were those for the iPhone XS, Galaxy S9, Galaxy J3, Moto g6 Play and Vivo 5 Mini. In all, the FCC tested 11 cellphones representing eight models. The FCC did not test an iPhone 8.

The FCC's report concluded there was no evidence of "violations of any FCC rules" for the safety limit. "The FCC's tests confirm that all tested sample devices comply with the FCC's strict RF exposure guidelines," Julie Knapp, chief of the FCC Office of Engineering and Technology, said in a quote provided by the agency.

Two longtime critics of the FCC's regulation of cellphones said they were not won over by the agency's results. They criticized the FCC for relying on manufacturers to supply most of the phones tested and the testing software.

Joel Moskowitz, a cellphone expert at the University of California at Berkeley, said the FCC should have a process in place to test phones off the shelf without needing manufacturers to provide anything for the testing.

If only labs working with manufacturers can test devices, he said, "then there is a serious problem with the FCC testing protocol."

Epidemiologist Devra Davis, who founded the group Environmental Health Trust, said the FCC's process seemed designed to pass phones that failed the Tribune's tests.

A spokesman for the FCC said using the companies' software was necessary to achieve accurate results. Manufacturers, he said, can request confidentiality for their devices' technical details to protect trade secrets. The tests were conducted independently by FCC Lab engineers, he added.

Knapp's quote states: "FCC engineers had significant questions as to whether the tests (for the Tribune) were performed properly and consistent with FCC guidance and we expressed these concerns directly to the Chicago Tribune. Because we take seriously any claims of non-compliance with RF exposure standards, the FCC tested the same device models at our labs."

Apple declined comment this week beyond what it has previously told the Tribune. Motorola did not respond to emails but has said its phones comply with federal

standards. The company previously speculated that the Tribune's initial testing did not trigger the e5 Play's proximity sensors. Such sensors are designed to reduce a phone's power when it is touching or extremely close to a person, decreasing radiofrequency radiation. Samsung did not respond to an email from the Tribune.

The Tribune's tests were conducted by RF Exposure Lab in San Marcos, California, which for 15 years has performed radiofrequency radiation testing of new electronic devices for wireless companies. The lab is recognized by the FCC as accredited to test for radiofrequency radiation from electronic devices.

Lab owner Jay Moulton said all the Tribune's tests were done in accordance with detailed FCC rules and guidelines. He filed a 100-page report that the Tribune shared with the government and manufacturers.

After reviewing the nine-page FCC report, Moulton questioned why the agency didn't buy all phones off the shelf, saying it gives manufacturers the opportunity to pretest phones to ensure they would pass an FCC test. He also questioned why the FCC would need special software supplied by manufacturers to complete testing.

The sensors that reduce a phone's power when it is near a human body should be tripped during testing without needing additional software from manufacturers, he said. "I do testing for laptops that have sensors in there, and I don't have any special software," Moulton said.

Moulton said that after the Tribune's story was published, he was paid to conduct similar testing by attorneys representing plaintiffs in a class-action suit against Apple and Samsung. The suit alleges that the phone makers "intentionally misrepresented" the safety of their devices. Moulton said he is not being paid to act as an expert witness for those lawyers.

In a Dec. 5 filing, the plaintiffs' lawyers said Moulton's lab tested an iPhone 7+, an iPhone 8 and an iPhone XR as well as the Samsung Galaxy S8, Galaxy S9 and Galaxy S10. According to the filing, Apple phones tested above the federal limit, with the highest reading coming from an iPhone 7+, at more than twice the limit.

Neither Apple nor Samsung has filed a response in court.

Debate about the safety of cellphones has raged for years. High levels of radiofrequency radiation can heat biological tissue and cause harm, but it is less understood whether people, especially children, are at risk for health effects from

exposure to low levels over many years of cellphone use.

Authorities in the 1990s set the federal exposure limit based solely on the heating risks of cellphone radiation, building in a 50-fold safety factor. But some researchers — and lawyers — have questioned whether the limit is safe enough. Those questions have spawned a long-running lawsuit against phone makers, carriers and trade groups over cancer risks.

The Tribune's testing had two phases. One tested phones at the same distance from the body as manufacturers chose for their own premarket testing: from 5 to 15 mm away, depending on the model. This phase included retests of several models after manufacturers gave feedback on the test results.

The second phase tested phones at 2 mm from the body, to represent the phone being carried in a pocket.

The FCC's recent study did not test phones at the 2 mm distance. In the Tribune testing, only one of the cellphone models met the federal safety standard at that distance.

jmahr@chicagotribune.com