In an era where artificial intelligence is widely used in scientific research, a new international study issues an important warning: today's leading AI models remain unreliable in correctly identifying potential laboratory dangers. According to research published in *Nature Machine Intelligence*, none of the 19 most advanced AI systems were able to provide fully accurate laboratory safety recommendations.

The study used a new testing platform called **LabSafety Bench**, consisting of 765 multiple-choice questions and 404 open-ended scenarios simulating real laboratory conditions. The goal was to assess how accurately AI models can identify chemical hazards, explosion risks, and poisoning threats.

In multiple-choice questions, some models — including DeepSeek-R1 and GPT-4o — achieved around **85%** accuracy, correctly handling straightforward tasks such as how to dispose of broken glass contaminated with hazardous chemicals.

However, performance dropped sharply when the models faced open-ended questions requiring analysis of realistic lab situations. None of the systems exceeded **70%** accuracy. These questions involved identifying all risks in a given setup or predicting the consequences of incorrect human actions.

According to the researchers, many AI systems:

- misjudge hazards,
- overlook critical risks,
- and sometimes generate completely incorrect information.

This demonstrates that AI is not yet a reliable advisor in high-risk laboratory environments. Scientists acknowledge AI's usefulness in research but emphasize that safety-critical tasks still require human oversight.