

## Imaging leak test of protective masks – MaskIR-T

In the current crisis, decisions in favor of or against wearing protective masks are subject to a sensitive weighing of medical advantages and risks as well as of costs and benefits in a tense market situation. Even among experts, there is sometimes disagreement, resulting in quite uncertain consumers. In the meantime, an unmanageable number of new products and solutions are being offered in response to the shortage of protective masks. A fast and clear procedure can help decision-makers and consumers to evaluate them. This is achieved by imaging the breathing air and droplets, visualizing their movement. To this, spectral infrared thermography is used. In a first step, different types of protective masks can be examined on head models in the laboratory: Where does air escape, where droplets? Which impact have the type and the fit of the mask? What happens in case the mask is wet? As long as the demand for protective masks remains high, the project can prime the development of a tailor-made solution for 100% testing in mass production.



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Figure: Commercially available disposable mask. The arrows indicate potential escape routes of breathing air and droplets.