

Personal Protective Equipment (PPE)

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Today, we visited a personal protective equipment testing laboratory. We acted as journalists to observe and report how protective clothing is tested for police officers, firefighters, and army personnel.

What is PPE?

PPE = Personal Protective Equipment

Special clothing for safety

Used by:

- Police
- Firefighters
- Army personnel



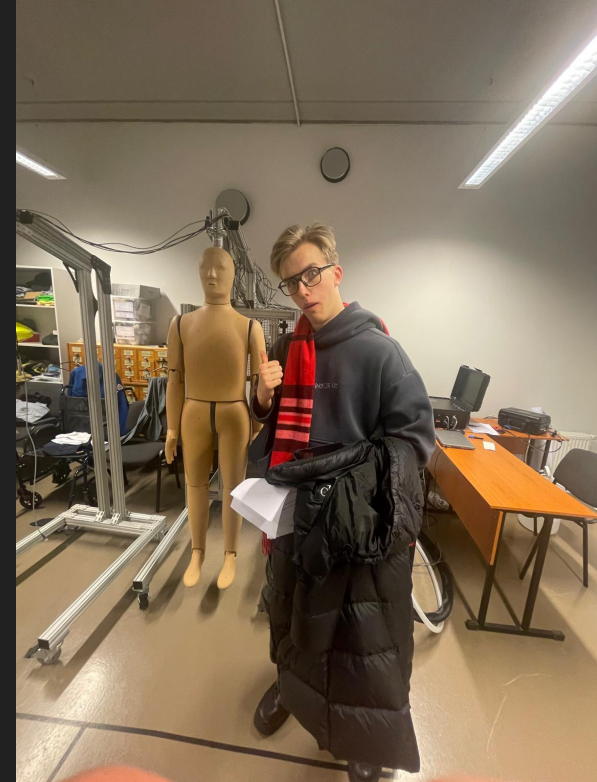
About the Lab

- Lab was established in 2020 during COVID-19
- From mask testing to leading European lab
- Worth in total 2 Million euros
- Most expensive object is ANDI which is worth more than 500 thousand euros
- Lab relocated in 2022



ANDI - The Sweating & Heat-Testing Robot

- **ANDI = *Advanced Newton Dynamic Instrument***
- **Special robot that can sweat and mimic human heat behavior**
- **One of only Fourteen robots (13/14)**
- **It costs more than €500,000 to build**
- **Tests with ANDI often last around 8 hours**
- **Used to see how clothing handles heat, sweat, and temperature changes**



Water Resistance Testing (Waterproof & Liquid Protection)

1. Clothes tested to see if water *penetrates the fabric*
2. Garments are sprayed or placed under pressure to simulate rain
3. Tests include seams and material structure
4. Sometimes done on a mannequin in rain simulation machines



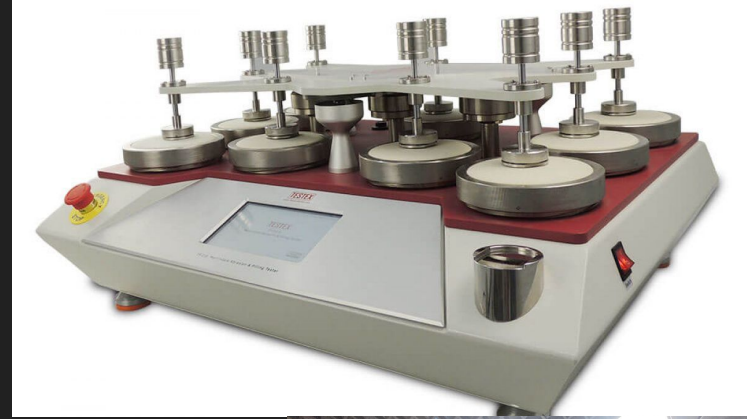
Fire & Heat Durability Testing

1. Clothing exposed to **direct flames or high heat**
2. Fabrics must not *ignite, melt, or drip*
3. Heat radiation tests measure how long heat takes to transfer through material



Jargon

1. **Marty/pancake maker** -Pilling tester machine
2. **Elga**- Distilled water making machine
3. **Lietutiņš**- Rain imitator machine
4. **Breathing imitator** -A device that breathes in and out to test how well masks work.



Why Testing Matters

1. Prevents serious injuries and accidents
2. Ensures clothing works in real conditions
3. Reduces risks for police, firefighters, and soldiers
4. Improves safety before equipment is used

Conclusion

1. PPE is carefully tested using science and technology
2. ANDI and other machines replace dangerous human testing
3. Testing improves protection and saves lives



Thank You For Your Attention!