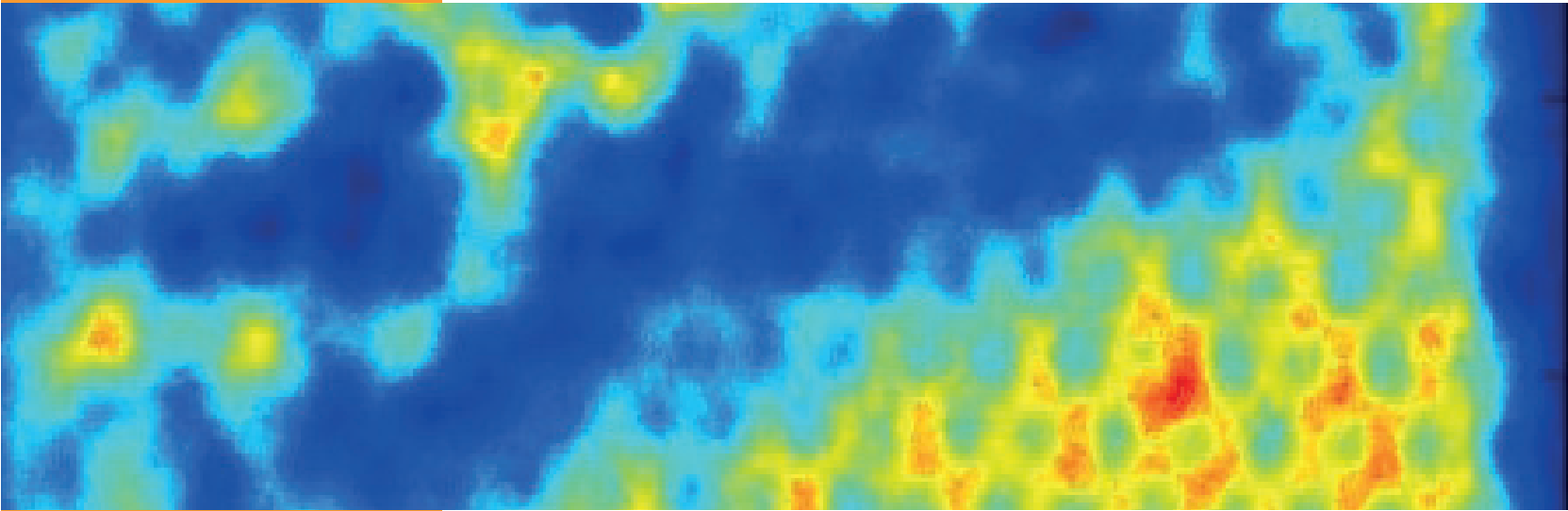




**Multitel**  
Applied Photonics

# Terahertz imaging and spectroscopy



Multitel offers THz characterization (imaging and spectroscopy) on various samples and Femtosecond laser sources for THz generation.

## ■ Spectroscopy

- Large spectrum (0.1 - 6 THz)
- Determination of materials chemical and physical properties (ex. refractive index)
- Sample thickness measurement

## ■ Imaging

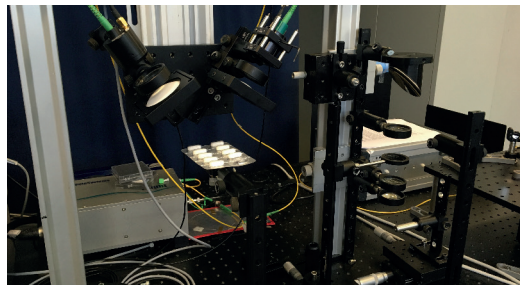
- Intensity
- Phase
- Multispectral

## ■ Laser source

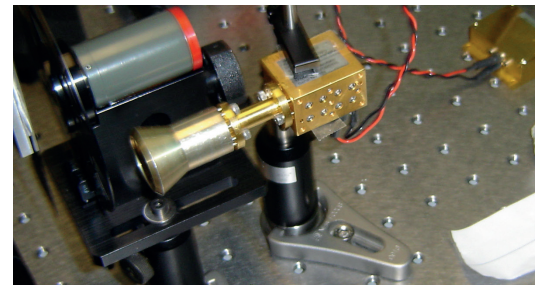
- 70 fs laser source at 1550 nm
- 100 mW average power for 50 MHz repetition rate
- Compact full fibre configuration, high reliability and stability



Femtosecond laser at 1.55 microns, developed by Multitel



Fibre coupled TDS THz system



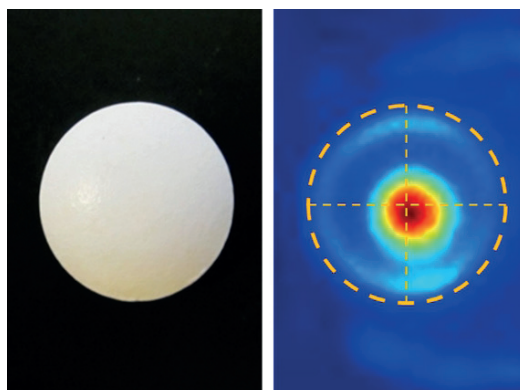
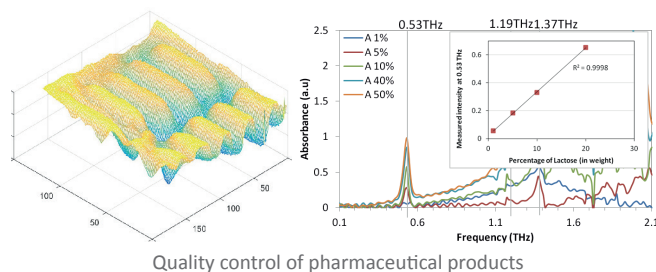
THz CW imaging system

## ■ Characteristics of THz radiations

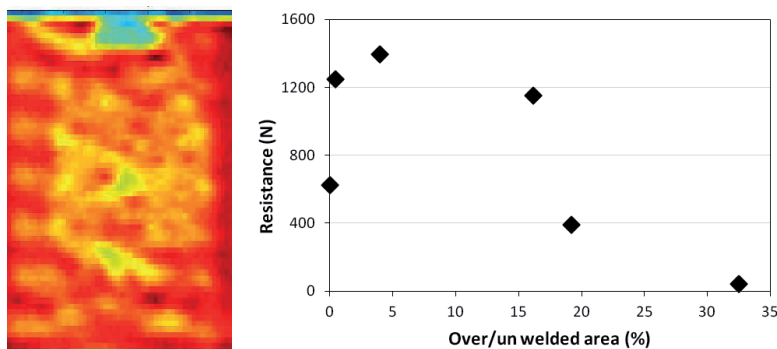
- Non-ionizing, non-invasive and non-destructive
- Low absorption through several materials (paper, plastics, wood, textiles...)
- High absorption by polar molecules (water)
- High reflection by metals
- THz signatures exist for each material (drugs, DNA, pollutant...)

## ■ Application fields

- Non destructive testing
- Coatings
- Pharmaceuticals
- Recycling
- Process control
- Security
- Biomedical



Non-destructive inspection of pharmaceutical tablet



THz image of subsurface micro-structure in hybrid joints and prediction of the joint's resistance

### MULTITEL HEADQUARTERS

Parc Initialis  
Rue Pierre et Marie Curie 2  
7000 Mons - Belgium

### EUROMETROPOLITAN RESEARCH CENTRE

ZI Tournai Ouest 1  
Rue du Progrès 13  
7503 Tournai - Belgium

### MULTITEL FRANCE

EuraTechnologies  
165 Avenue de Bretagne  
59000 Lille - France

commercial@multitel.be  
Tel.: +32 65 34 27 19



www.multitel.be