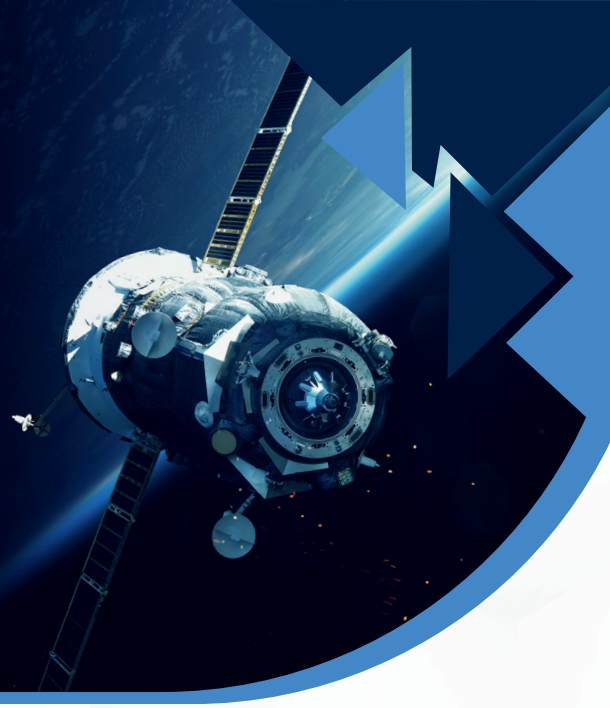
TRAD
Tests & radiations
a HEICO company

MATERIALS TESTING



TRAD MATERIALS TESTING

PARTICLE IRRADIATION

- Protons
- Electrons
- Gammas

UV IRRADIATION

- AM0 UV spectrum
- Acceleration factor

SOLAR CELL SIMULATOR

- Solar cell electrical characterization

THERMAL CYCLING

- Vacuum
- Atmospheric pressure
- Damp heat

FUNCTIONAL TESTING

- Visual inspection
- Optical, Thermo optical and Electrical measurements

All our tests comply with the standards imposed by the **European Cooperation for Space Standardization.**

Particle Irradiation

- In accordance with **ECSS-Q-ST-70-06C**
- **Protons** from 5 keV to 60+ MeV
- **Electrons** from 80 keV to 4 MeV
- **Gammas** (Cobalt 60)

UV Irradiation

- In accordance with **ECSS-Q-ST-70-06C**
- AM0 UV spectrum, acceleration factor up to **6 suns**
- In situ monitoring of UV flux, vacuum pressure and sample temperature

Solar Cell Simulator

- Solar cell electrical characterization under AM0 spectrum AAA class sun simulator
- I (V) characteristic, Voc, Isc, Vm, Im, Pmax, FF
- Thermal coef. in +20°C/+70°C

Thermal Cycling

- Sample size up to **30x30cm**
- **Vacuum facility**
  - -Pressure lower than 1e-5 mbar
  - -Temperature from -170°C to +200°C
- **Atmospheric pressure facility**
  - Inert atmosphere (N or Ar)
  - Temperature from -180°C to 400°C
- **Damp heat**
  - In accordance with ISO9022-2-2015
  - 95% humidity, 50°C
  - 24h or more if needed

Functional Testing

- **Visual inspection**
  - Optical microscope
  - SEM & X-ray analysis
- **Optical measurements**
  - On bulk and coating :
    - From 250nm to 2500nm
    - Transmission
    - Reflectivity
  - On optical fiber :
    - From 250nm to 2500nm
    - RIA
  - Thermo Optical measurement :
    - From 2µm to 20µm
- **Electrical measurements**
  - High voltage tests
  - Insulation resistance, conductivity, continuity

907 voie l'Occitane -31670 Labège -France
Tel: +33 (0)5 61 00 95 60 -Fax: +33 (0)5 61 00 95 61
E-mail: trad@trad.fr
For more info, please visit : www.trad.fr

afaq ISO 9001 Qualité AFNOR CERTIFICATION

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