

CAPPA SHEDS LIGHT ON CHARACTERISATION OF SURFACE RESIDUES



BACKGROUND

Biocel Ltd. was founded in 1966 by Dr Karl McCarthy and is one of Ireland's leading manufacturers and suppliers of chemical formulations to industry. Based in Little Island in Cork, Biocel develops biochemical and chemical process aids and additives for a variety of Irish industries. These include brewing and beverage, dairy, food production, laundering, construction, water treatment, pharmaceutical and the public sector.

THE NEED

Biocel wished to assess the manner in which a variety of chemical formulations would interact with a surface residue on a metallic substrate. The substrate in question would ideally be stripped of the residue, allowing for recycling rather than disposal of the metal part. Formulations were assessed to determine their efficacy in performing this task.

THE SOLUTION

The Centre for Advanced Photonics & Process Analysis (CAPPA) is at the forefront of photonics research in Ireland. CAPPA used Fourier Transform Infrared (FTIR) and Raman spectroscopy and elemental spectroscopy to characterise sample surface substrates to determine whether chemical or elemental residues were present after exposure to a variety of cleaning formulations.

CAPPA used FTIR, Raman and elemental spectroscopy techniques as its capabilities cover the spectral range from the ultraviolet, through the visible, near IR and mid IR and beyond to the Terahertz region. FTIR measurements at all wavelengths can also be carried out with an evacuated optics bench, eliminating atmospheric moisture absorptions for ultimate sensitivity and stability.



BENEFITS OF THE ENGAGEMENT

The collaboration with CAPPA enabled Biocel to access the Centre's expertise and equipment, complementing Biocel's internal company knowledge. With a strong track record of conducting testing in this area, CAPPA ensured Biocel received a quick and accurate result. CAPPA was also able to advise Biocel on the funding options available to them and assist the company in their successful application for an Enterprise Ireland Innovation Voucher.

“We were delighted to work with CAPPA through the Enterprise Ireland Innovation Voucher Programme. They were able to understand our very specific project needs and were able to characterize sample surface substrates to the highest standards. We look forward to engaging with CAPPA in the future.”

- Karl McCarthy – Head of Innovation, Design and Implementation, Biocel.