

Solid State and Elemental Analysis Unit (SSEA Unit) Chronos ¹⁴C Carbon Cycling Facility

1. Rates for Access to Powder XRD, X-ray crystallography, surface analysis by XPS and ToF-SIMS, micro-XRF, Radiocarbon and IRMS analysis.

Rates are in AU\$, ex-GST, current for 2021-2022 inclusive. Contact Dr Yu Wang for XRD annual subscription enquiries.

| | Internal Rates ^a | Institutional Rate ^b (ex-GST) | Commercial Rate ^c (ex-GST) |
|---|-----------------------------|--|--|
| Training, all instruments^d | Free | Free | Free |
| <u>X-ray Diffraction Laboratory</u> | | | |
| Panalytical MPD (Cu) Bulk Powder X-ray Diffractometer Contact Yu Wang yu.wang@unsw.edu.au | Trained User \$30/hour | Trained User \$60/hour | Trained User \$150/hour Service Rate \$250/hour |
| Panalytical Aeris Benchtop (Cu) Bulk Powder X-ray Diffractometer Contact Yu Wang yu.wang@unsw.edu.au | Trained User \$30/hour | Trained User \$60/hour | Trained User \$150/hour Service Rate \$250/hour |
| Panalytical MRD (Cu) X-ray diffraction for thin-film, grazing angle, stress, texture measurements Contact Yu Wang yu.wang@unsw.edu.au | Trained User \$30/hour | Trained User \$60/hour | Trained User \$150/hour Service Rate \$250/hour |
| Panalytical Empyrean 1 (Cu) X-ray diffraction for thin-film, grazing angle, stress, texture measurements Contact Yu Wang yu.wang@unsw.edu.au | Trained User \$30/hour | Trained User \$60/hour | Trained User \$150/hour Service Rate \$250/hour |
| Panalytical Empyrean 2 (Co) Bulk Powder X-ray Diffractometer Contact Yu Wang yu.wang@unsw.edu.au | Trained User \$30/hour | Trained User \$50/hour | Trained User \$150/hour Service Rate \$250/hour |

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|---|---|--|--|
| Panalytical Empyrean 3 (Ag) Bulk Powder X-ray Diffractometer with position sensitive detector Contact Yu Wang yu.wang@unsw.edu.au | Trained User \$30/hour | Trained User \$50/hour | Trained User \$150/hour Service Rate \$250/hour |
| Bruker D8 thin-film XRD (Cu) 5kW rotating anode X-ray source with 2D detector and mapping stage for HRXRD, RSM and 2DXRD Contact Yu Wang yu.wang@unsw.edu.au | Trained User \$30/hour | Trained User \$60/hour | Trained User \$150/hour Service Rate \$250/hour |
| Rigaku Smartlab thin-film XRD (Cu) 9kW Rotating anode X-ray source for HRXRD, fast RSM Contact Yu Wang yu.wang@unsw.edu.au | Trained User \$30/hour | Trained User \$60/hour | Trained User \$150/hour Service Rate \$250/hour |
| Mikropack NanoCalc 2000 UV-Vis-NIR thin-film analyser Contact Yu Wang yu.wang@unsw.edu.au | Trained User Free | Trained User Free | Trained User Free |
| <u>Crystallography Laboratory</u> Bruker Kappa Apex (Mo) Single-crystal X-ray diffractometer Bruker D8 Quest (Mo) Single-crystal X-ray diffractometer Contact Mohan Bhadbhade m.bhadbhade@unsw.edu.au | Co-authorship Rate \$130/sample Staff data collection \$120/sample per temperature User data collection \$80/sample per temperature Structure Solution of Synchrotron Data \$50/dataset | Service Rate \$130/sample | Service Rate \$450/sample |
| <u>Surface Analysis Laboratory</u> Thermo ESCALAB 250Xi X-ray Photoelectron Spectrometer (XPS) Contact Bill Gong b.gong@unsw.edu.au | Service Rate \$70/hour Trained User \$40/hour | Service Rate \$172.50/hour | Service Rate \$287.50/hour |
| IONTOF Time of Flight Mass Spectrometer (ToF-SIMS) Contact Bill Gong b.gong@unsw.edu.au | Service Rate \$70/hour Trained User \$40/hour | Service Rate \$172.50/hour | Service Rate \$287.50/hour |

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|--|--|--|---|
| Alpha-Step D-600 Stylus Profiler Contact Sonia Yin songyan.yin@unsw.edu.au | Trained User Free | Trained User Free | Trained User Free |
| Polos Spin150i spin coater Contact Sonia Yin songyan.yin@unsw.edu.au | Trained User Free | Trained User Free | Trained User Free |
| <u>CHRONOS ¹⁴CARBON CYCLING FACILITY</u> Radiocarbon (¹⁴C) Analysis Contact Juee Vohra j.vohra@unsw.edu.au | Service Rate Sample preparation (if required) \$100/sample Accelerator mass spectrometry \$100/sample | External collaborative rate \$250/sample Please contact Chris Turney to discuss any collaborative proposals. c.turney@unsw.edu.au | \$600/sample. |
| Isotope Ratio Mass Spectrometry (IRMS, ¹³C, ¹⁵N) Contact Juee Vohra j.vohra@unsw.edu.au | \$20/sample or std or \$10/sample or std if researcher weighs sample | \$40/sample or std or \$20/sample or std if researcher weighs sample | \$40/sample |
| <u>XRF Laboratory</u> Micro-XRF Mapping Contact Helen Wang huixin.wang@unsw.edu.au | \$30 training charge \$30/hour (8am-5pm) \$100 overnight rate for trained operator Free access for data analysis. | \$60/hour for service measurements | \$60/hour for service measurements |

(a) Internal rate applicable to all UNSW account holders (including affiliated institutes), ADFA and also LIEF Partners.

(b) Institutional rate is applicable to all other universities, and government institutions including ANSTO, and CSIRO.

(c) Commercial rate covers all other non-government users.

(d) Training on SSEA Unit equipment is **free for any user**.

2. Bulk Elemental Analysis Rates: ICP, XRF, LC-OCD, IC, combustion analysis for DOC, DIC, and organic solids

Elemental analysis is usually charged per sample. The rate can vary significantly depending on the number of samples, the type of sample preparation, and the number of analytes requested.

A separate pricing sheet is available for services from the **ICP Laboratory** (sample grinding, microwave acid digestion, ICP-MS, ICP-OES, LC-OCD, anion chromatography, combustion analysis for DOC, DIC). For users that have specific enquiries about services from our ICP Laboratory please contact Rabeya Akter (r.akter@unsw.edu.au) or Khorshed Chinu (k.chinu@unsw.edu.au).

A separate pricing sheet for services from the **XRF Laboratory** (XRF and micro-XRF mapping, rock crushing, pressed pellets, CHNSO combustion analysis of solids). For users that have specific enquiries about services from our XRF Laboratory please contact Helen Wang (huixin.wang@unsw.edu.au) or Brit David (brit.david@unsw.edu.au).

3. Research Grant Budgets

When an **in-kind** contribution is requested in your application, please use **\$175/hour** to cover MWAC salaries, costs for power, repairs etc provided by the University. If costs are on a per sample basis, assume 1 hour per sample.

4. Enquiries

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