

# Independent Mineral Standards are The CRM Specialists

We provide technical leadership in the development, manufacture, and use of certified reference materials (CRMs).

At IM Standards, we specialise only in certified reference materials (CRMs). Our expertise and experience are driving innovation to reshape the industry. Independent Mineral Standards is based in Western Australia, a part of the world known for its strong mining and resource sectors.

Our team boasts outstanding technical capabilities, along with exceptional expertise in geology, resource modelling, minerals analysis, data analysis, geo-chemical laboratories, data analysis, materials processing and engineering.

Originally Pilbara Standards, IM Standards have been operating since 2012. From humble beginnings we have become **the world's** largest supplier of iron ore certified reference materials, supplying every top-tier iron ore company in Australia and many specialist laboratories.

In 2021 we rebranded to Independent Mineral Standards, to better reflect the growing breadth of our product range and our focus on certified reference materials across all commodities.

#### We care passionately about our customers and the quality and consistency of our products.

We are meticulous about data and detail, backed by the expertise, experience and technical know-how of our team.

Our product range covers major commodities (including iron, bauxite, gold and more). If you can't find what you need, we can make it for you. In addition to a large catalogue of in-stock CRMs, we custom-produce CRMs to client specifications from client material. We are the only company in the world that offers both custom and catalogue crushed CRMs and are at the forefront of innovation in this essential category with our newly released crushed gold CRMs.

Independent Mineral Standards – The CRM Specialists.

At Iluka Resources, we rely on reference materials for quality control monitoring of our laboratory processes during mineral sands exploration and processing. We first contacted Independent Mineral Standards (IMS) to prepare a batch of mineral sands reference materials. After evaluating the homogeneity of the batch provided by IMS, it became apparent that batches from our previous supplier required reprocessing. IMS has since reprocessed three batches of reference material for us, resulting in a significant decrease in typical relative standard deviation from 4.5% to 0.9%. By switching to IMS as our supplier, we have greatly improved our process control and quality control through the use of fit-for-purpose reference materials.

Produced under our ANAB 17034 accreditation, we guarantee the inter-comparability of measurement results worldwide and the highest level of quality assurance that an accredited impartial manufacturer can obtain.

IMS has the global seal of approval, with SAI Global Assurance ISO 9001:2015 certification.







# Setting a New Standard

#### **Specialist Products & Services**

#### **TECHNICAL EXPERTS**

Our multi-disciplinary team of inhouse experts brings significant experience in geology, materials science, metallurgy, analytical chemistry, and statistics.

#### **UNIQUE PRODUCTS**

We are the only manufacturer of both crushed iron ore and crushed gold CRMs. We use our technical skills to design, produce, and certify unique custom reference materials to our clients' requirements.

#### **Operational Excellence**

#### **QUALITY ASSURED**

Our ANAB ISO 17034 certification means we are committed to continuous product improvement, workforce training and competency and our operational excellence.

#### .PATENTED PROCESSES

Through our expertise and experience, we create new products and processes that continue to reshape and develop the industry. Our Crushed CRM products are patent pending.

#### **Customer Focused Approach**

#### **EXPERIENCED EXPERTS**

Our staff are experienced specialists who are leaders in the certified reference material sector. We are proud of our technical expertise in geology, metallurgy, analytical chemistry, and statistics.

#### **INDEPENDENTLY OWNED**

We are an independently owned company. Our owners and senior management are involved in the operations daily, which ensures that our clients receive a high level of responsiveness and care.



#### **CUSTOM & CATALOGUE**

We custom-produce CRMs to client specifications from client material. Or you can choose from our catalogue of in-stock CRMs.

#### COMMODITIES

We offer products and services across a broad range of commodities. If you can't find what you need, we can make it for you.

#### **PROPRIETARY TECHNOLOGY**

Our unique production equipment has been designed and fabricated in-house. The refinement of our production technology has led us to develop world leading homogeneity in our materials.

#### **MARKET LEADING HOMOGENEITY**

Leading material homogeneity tested using extensive repeatability analysis, across all products and commodity types.

#### **DRIVEN BY DATA**

We're driven by data as we know our customers need trust and transparency. We provide full access to our data and will work with you to assist your interpretations where needed.

#### **ACCESS TO SUPPORT**

We care about our suppliers, employees, and customers. We are committed to providing you with the support you need to get the right results.

### World Class Experts, Leading the Way

IM Standards is led by an experienced, specialist management team, globally acknowledged as leaders and innovators in their field.

#### The management team includes significant experience in:



#### **Economic Geology**

Precious and base metals exploration and production, resource estimation as a JORC competent person role, and geo-metallurgy expertise.



#### **Materials Science**

The technology and design of advanced mineral products and the production and operations of powder processing and materials handling systems.



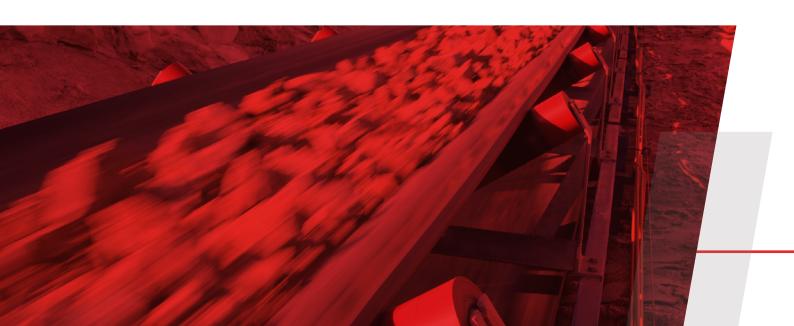
#### **Analytical Chemistry**

Operation and management of geo-analytical laboratory facilities servicing global exploration, mining and mineral markets. Development of innovative solutions for chemical, mineralogical and metallurgical analysis.



#### **Statistics**

In-house capabilities in advanced mathematics and statistics. This has enabled IM Standards to develop proprietary models for ISO 17034 accredited certification and proficiency testing capabilities.



## Specialist Knowledge, Tailored to Your Needs

Innovation is in our DNA. We are the world's only producer of crushed iron ore and crushed gold CRMs. Our crushed CRMs test both sample preparation and analysis, and their product homogeneity is unmatched in the market.

Our technical expertise allows us to develop specialist reference materials to meet the specific needs of our customers in a range of commodities. Our capabilities include:

- ISO 17034 accredited CRM certification.
- Hygroscopic moisture corrected LOI materials.
- Unique quantitative XRD reference materials for mineralogy.
- Spiked and blended materials including minor and trace analytes to certifiable concentrations, and high Cl iron ores.
- Particle size distribution specific grinding, and particle size certified materials.
- Pigeon-paired pulverised CRMs, designed across multiple analytes for blind submission to laboratories.
- Down hole tool calibration block construction and certification.
- Reference materials for metallurgical testing processes.
- Proficiency Testing capabilities, using our years of accumulated data across many laboratories to provide fair and unbiased performance assessment feedback.

# Iron & Bauxite CRMs

We are the world's largest supplier of iron ore certified reference materials, supplying every top-tier iron ore company in Australia and many specialist laboratories. We offer the most complete and advanced range of iron ore certified reference materials in the world.



#### IN HOUSE TECHNOLOGY

IM Standards are the world's only current commercial manufacturer of crushed iron ore and bauxite certified reference materials.

#### **CRUSHED OR PULVERISED**

We offer crushed or pulverised iron ore CRMS.

We can manufacture custom-produced product to client specification or choose from our pre-produced catalogue.

#### WORLD LEADING CATALOGUE

Our expertise and product knowledge have combined to develop a unique range of specialist, technical iron ore CRMs. This range includes ISO 17034 accredited materials; hygroscopic moisture corrected LOI materials; unique QXRD reference material; spiked and blended materials including minor and trace analytes to certifiable concentrations (eg high phosphorous, high manganese, high chlorine iron ores).

#### **FLEXIBLE BATCH SIZE**

Our flexible system allows us to produce custom batches from 30 kg to 20 tonnes.

# Custom Produced CRMs

Our expertise in meeting specific client requirements is evident in our production of over 200 custom batches of CRMs. To facilitate this service, we have developed our own custom manufacturing capability, allowing us to produce high-quality CRMs to customer specifications.



#### Why use IM Standards for Custom Batch Production?

#### **COMMODITY RANGE**

We produce a range of different commodities including iron, gold, bauxite and more.

#### **PRODUCT STORAGE**

We can store your materials allowing you to call off product on demand.

#### **BATCH SIZE**

We manufacture from small batch sizes (30 kg) up to 20 tonnes.

#### **PACKAGING OPTIONS**

We provide a range of packaging options and sizes. This includes sachets, jars and bags, from 5 g up to 5 kg.

#### **QUALITY COMPLIANCE**

Quality assured to ISO 17034 accreditation standards.

# Gold Certified Reference Materials

Innovating Gold CRMs, Leading The Market

Our deep technical expertise in certified reference materials has enabled us to develop the world's most comprehensive range of gold certified reference materials, featuring our new patent-pending crushed gold CRMs and our market-leading pulverised gold CRMs.

### CrushedCRM™ Gold

The only CRMs designed and certified for PhotonAssay™ and PAL.

CrushedCRMs<sup>™</sup> are essential for laboratory methods that analyse a crushed sample, with the following advantages over pulverised CRMs:



#### Particle Size

They have the same particle size as crushed routine samples analysed.



#### Certification

They are certified for PAL, PhotonAssay™ and Fire Assay or independently of any method.



#### Stability

For PhotonAssay™ quality control, they are stable over time.



#### Sample Prep

They test the sample preparation process.



#### **Truly Blind**

They are truly blind to analysis when submitted from the field.

### **Pulverised Gold CRMs**

Designed for use by laboratories, mine sites and geologists, IM Standards have an industry-leading range of Pulverised Gold Certified Reference materials. We offer full access to all our data and specialist advice for any troubleshooting or problem-solving you made need our assistance with.

### Why Use IM Standards Pulverised Gold CRMs?

#### **UNIFORM HOMOGENEITY**

Our quality is defined by our consistency. We measure homogeneity and report every batch.

#### **SUPPLY GUARANTEE**

Large batch sizes offer security of supply, minimising costly changeovers and lengthy waits for product.

#### **FULLY CHARACTERISED**

Round robin testing for robust consensus on gold concentration.

#### **ACCURATE PARTICLE SIZING**

Particle size distributions are designed to match the target for routine prepared samples in the laboratory. This ensure homogeneity is maximised and erroneous handling errors are minimised.

#### **LONG TERM STABILITY**

We monitor the chemical and physical properties of our CRMs over time, so you can trust the property values in the long term.

Download the latest research comparing the homogeneity of Pulverised Gold CRMs across manufacturers.







### PLEASE VISIT OUR WEBSITE TO DISCOVER MORE ABOUT IM STANDARDS.

+61 8 6155 7616

enquiries@imstandards.com.au

o 16 Durham Road, Bayswater, WA 6053

www.imstandards.com.au

