

## *TIDAS MSP-systems from J&M offer:*

- *the ability to measure UV-VIS spectra of fibres in transmission mode*
- *all applications regarding reflectance (brightfield/darkfield), polarization or fluorescence, depending on the chosen configuration*
- *acquisition time less than one second*
- *on line video image and simultaneous acquisition of spectra with J&M TidasVISION software*
- *flexible adjustable measurement diaphragm*
- *flexible use in forensic sciences (MSP 400/800), in petrography (MSP 200) as well as in material sciences or biology (MSP 200/400)*
- *photomultiplier or CCD detection*
- *microscopes from different manufacturers can be adapted*

## *General*

Vitrinite reflectance measurement is a helpful tool in steel industry for determination of coal quality. Petrographic analysis has been recognised internationally as important in the context of the genesis, metamorphism and usage of coal. The international Committee of Coal Petrography (ICCP) has made some recommendations concerning the nomenclature and the analytical methods. In ISO/DIN Norm 7404 as well as in ASTM D2798 the microscope preparation is described as well as the measuring procedure and the handling of the data in comparison with reflection standards. Detecting fluorescence spectra by coupling a very sensitive spectrometer to the microscope, other standards like the Thermal Alteration Index (TAI) or the Spore Colour Index (SPI) can be used for more detailed analysis in addition.

The instruments from J&M make these types of analysis very easy in daily routine procedures.

## *TIDAS MSP 200*

The TIDAS MSP 200 instrument was developed especially for the needs in petrography and geochemistry.

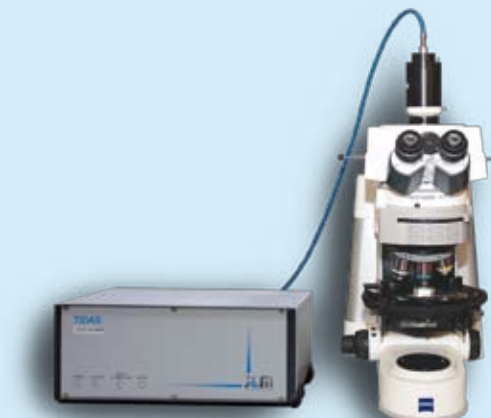
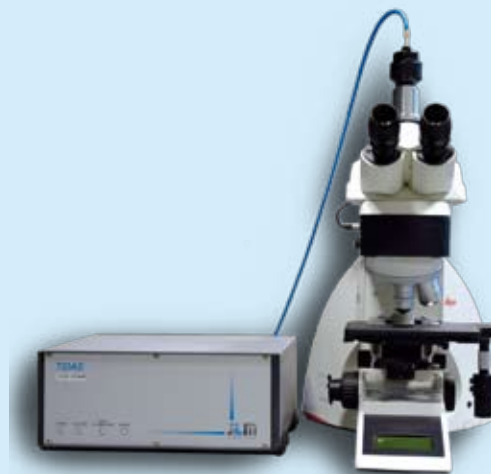
Depending on the chosen configuration of the instrument you can do reflection as well as fluorescence or polarization analysis on various samples.

The J&M MSP 200 is working according the DIN/ISO standard in the data acquisition procedure as well as in the analysis mode.

Final histograms display the results in quantitative columns and relative shares.

J&M's MSP 200 systems are used in steel production, petrographic or geochemical laboratories all over the world.

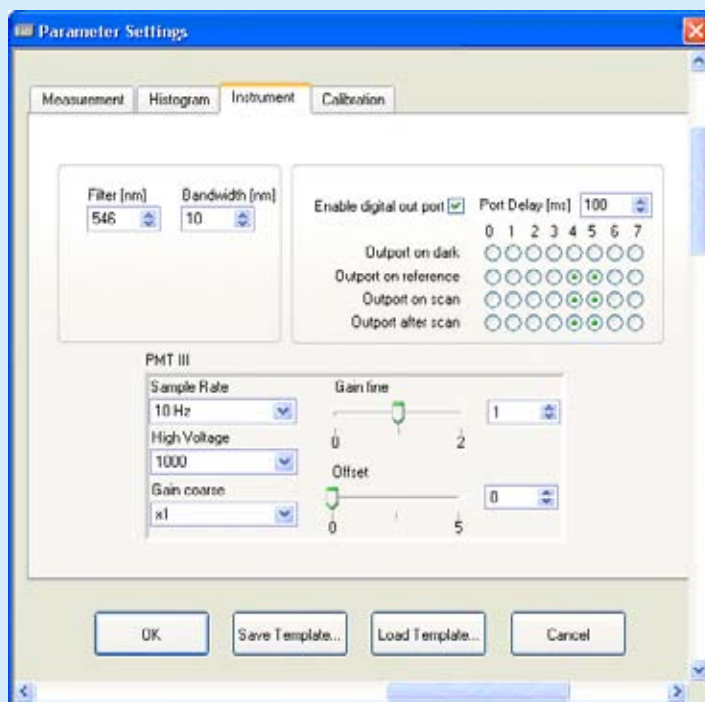
## *MSP 200 coupled to microscopes from different manufacturers*



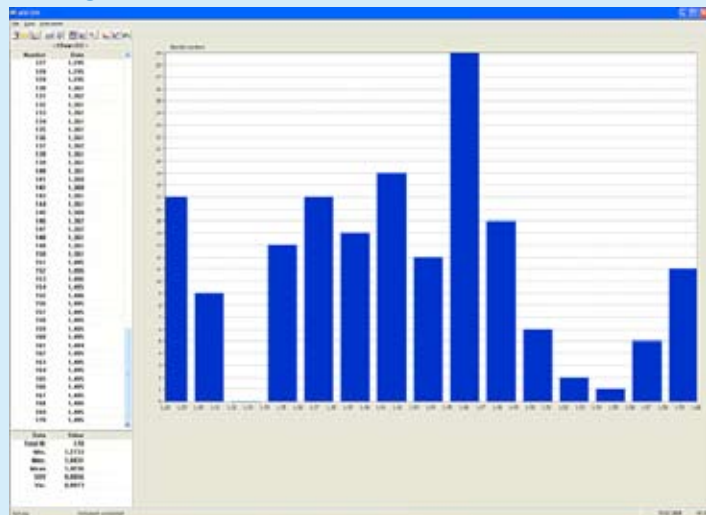
### Software and accessories

With the MSP 200-Software (Win XP/Vista) from J&M you can control the complete system, adjust the measuring parameters and calibrate the instrument. Single values can be acquired or you can work according to the min/max-method. Data can be stored in up to ten different channels. Furthermore the software allows displaying the results as various histograms or tables. Printing or exporting the results into programs like excel or others is also possible. Finally, for a calibration of the system, J&M offers certified standards with different reflection values (Spinell, Sapphire, YAG, GGG, Zirkonia, Strontium-Titanate).

### Software MSP 200



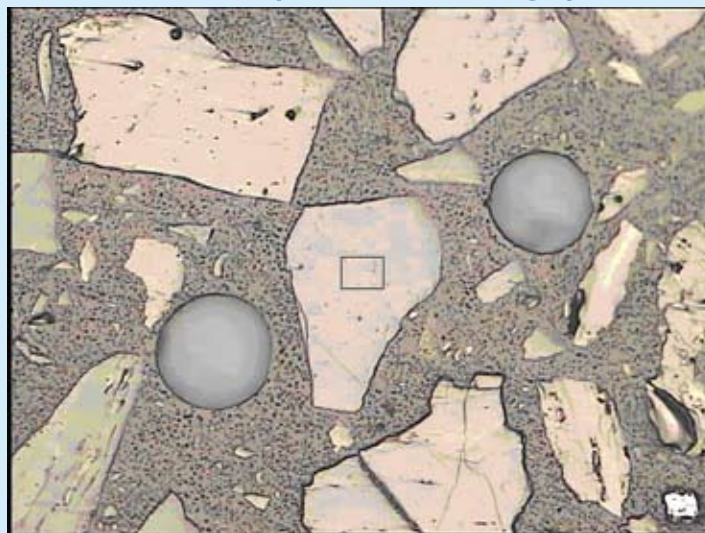
### Histogram



### Applications

- rank of coal determination by Vitrinite and Fusinite reflection
- characterisation of bituminous coal in Epifluorescence technique
- analysis of Kerogene
- determination of percent shares in multicomponent detection
- valuation of amorphous material, Algae and part of plants in palaeontology observations
- determination of maceral group compositions from bituminous coal and anthracite

### Picture of coal sample with measuring spot



### Video imaging

On line video imaging and simultaneous acquisition of data is possible with J&M's TidasVISION software. The flexible adjustable measurement diaphragm marks the region of interest directly on your sample image.