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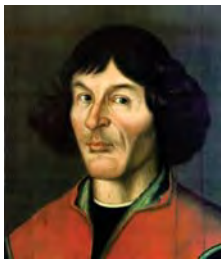
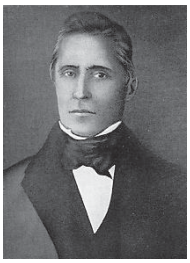
65th ICCP Sosnowiec Poland 2013 - in good company



Nicolaus Copernicus
(Mikołaj Kopernik)
astronomer

Fryderyk Chopin
composer / pianist

Marie Skłodowska-Curie
chemist / physicist
double Nobel Laureate



Paweł Strzelecki
geologist

ICCP Poland 2013 - Sponsors

ŻYWIEC ZDRÓJ S.A.

The Society for Organic Petrology

ZEISS

j&m ANALYTIK AG

ICCP

FOSSIL Hilgers Technisches Buero Reflectance Measurement

inside this issue

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From the Editor

Grim times are currently embracing employment prospects in the resources industries in Australia. After 20 or more years of almost continual expansion, most of the major and minor mining houses have savagely cut back on staff over the last 12 months. These cut backs have been across the board, from metals through to fossil fuels. Growth in the recent past has been driven largely by expansion in China as well as other Asian powerhouses such as India. These economies are maturing while growth in other parts of the world remains weak. The rapid increases we have seen in demand for commodities over recent times seems unlikely to continue.

But it is not only are weaker demand from these economies that is affecting markets. I hear today that some 20% of Australian homes now generate their own power via solar cells, a rate not predicted to have occurred for anther 15 years. This trend has been driven by rising electricity prices, government subsidies and efforts to mitigate greenhouse gases. All these factors have been greatly affecting domestic electricity and coal markets.

There are a great many unknowns ahead for the world of fossil fuels. While many of us may be thinking the biggest difficulty will be to keep our jobs, there still remain many scientific challenges. ICCP needs to stay relevant in this ever changing world.

See you all in Poland to face some of these challenges!

Peter

From the President

Dear colleagues,

This is the final issue of the ICCP News before the meeting in August in Sosnowiec, Poland (http://prac.us.edu.pl/~iccop-tsop-2013/). The detailed agenda is given in this issue and again we have found trouble to squeeze our programme into the time available. It is always a very difficult task and the organising committee are to be thanked for their on-going efforts to make all the arrangements as easy as possible for the attendees.

Again we have a back-to-back meeting with TSOP and I hope that many colleagues will have the time to join in both. The organisers have been most thoughtful in their arrangements and have both associated field trips on consecutive days. This will allow many people to overlap who would not otherwise manage to see each other. This arrangement is very pleasing as it will allow for the maximum possibilities for exchange of informations.

I am very much looking forward to seeing you all again this year and I hope that many members who cannot usually make the meeting are able to do so this time.

Best regards

Petra David

ICCP President

Institutional Members of ICCP

TATA STEEL

http://www.tatasteel.com

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Research & Development Division
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Jamshedpur - 831 007
India
pkbanerjee@tatasteel.com / alokk.singh@tatasteel.com

Know Your Coal Petrologist #51

Caught in Belgrade in 2010 and clearly enjoying the meeting. Answer page 29.

The Organizing Committee invites to participate in 65th Annual Meeting of ICCP and 30th Annual Meeting of TSOP Sosnowiec, Poland August 25 - September 4, 2013

http://prac.us.edu.pl/~iccop-tsop-2013/

Hosted by University of Silesia, Katowice
http://www.english.us.edu.pl/

Organizing Committee

Honorary Committee:

Prof. Dr hab. Wiesław Banyś
Prof. Dr hab. Janusz Janeczek
Prof. Dr hab. Adam Idziak
Prof. Dr hab. Krystyna Kruszewska

Organizing Committee:

Prof. UŚ. Dr hab. Monika Fabiańska
Prof. UŚ. Dr hab. Leszek Marynowski
Dr hab. Magdalena Misz-Kennan
Dr Justyna Ciesielczuk
Dr Beata Smieja-Król
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Dr Krzysztof Szopa
MSc. Justyna Smolarek
MSc. Maciej Rybicki
MSc. Marta Kasprzyk
MSc. Kamila Banasik
MSc. Piotr Kotula

Topics

ICCP symposium:

Advances in coal and organic petrology and geochemistry

TSOP Technical sessions:

- coal petrology, mineralogy and geochemistry
- coal geology and utilization
- coal and environment
- Coal Bed Methane: geology, evaluation and utilization
- shale gas and shale oil: geology, extraction and utilization
- analytical techniques in coal and organic petrology and geochemistry

Short course:

Application of organic petrology and geochemistry to environmental studies.

The lecturer: *Prof UŚ. dr. hab. Monika Fabiańska*.

Short course highlights:

★ basic concepts of organic petrology and geochemistry for organic petrologists;
★ short history of organic geochemistry application in the environmental investigations;
★ changes of macerals during technological processes
★ the fate of fossil fuels in the environment in a view of petrological and geochemical research;
★ organic geochemistry of coal wastes and atmospheric aerosols – the case studies
★ future: the problems to solve.

This three-hour course is designed for geoscientists working on the junction of organic petrography, environmental protection and organic geochemistry. During the course, we propose in a first step to review basic concepts of organic petrology and geochemistry and huge progresses made in the recent years in its application in environmental protection. Next, we will look at the fate of fossil fuels and their products in the environment, i.e. emission, migration routes, ways of their accumulation in the environment and changes occurring in their geochemical characteristics during these processes. The case studies concerning coal wastes and atmospheric aerosols will illustrate the difficulties and advantages of petrological and geochemical approach to environmental problems. Despite much progress made in the last years, still there are unsolved questions, thus some of them will be presented at the end of this course.

Sponsors

Contacts

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mailto:iccop-tsop-2013@us.edu.pl

For general information feel free to contact with Magdalena Misz-Kennan:

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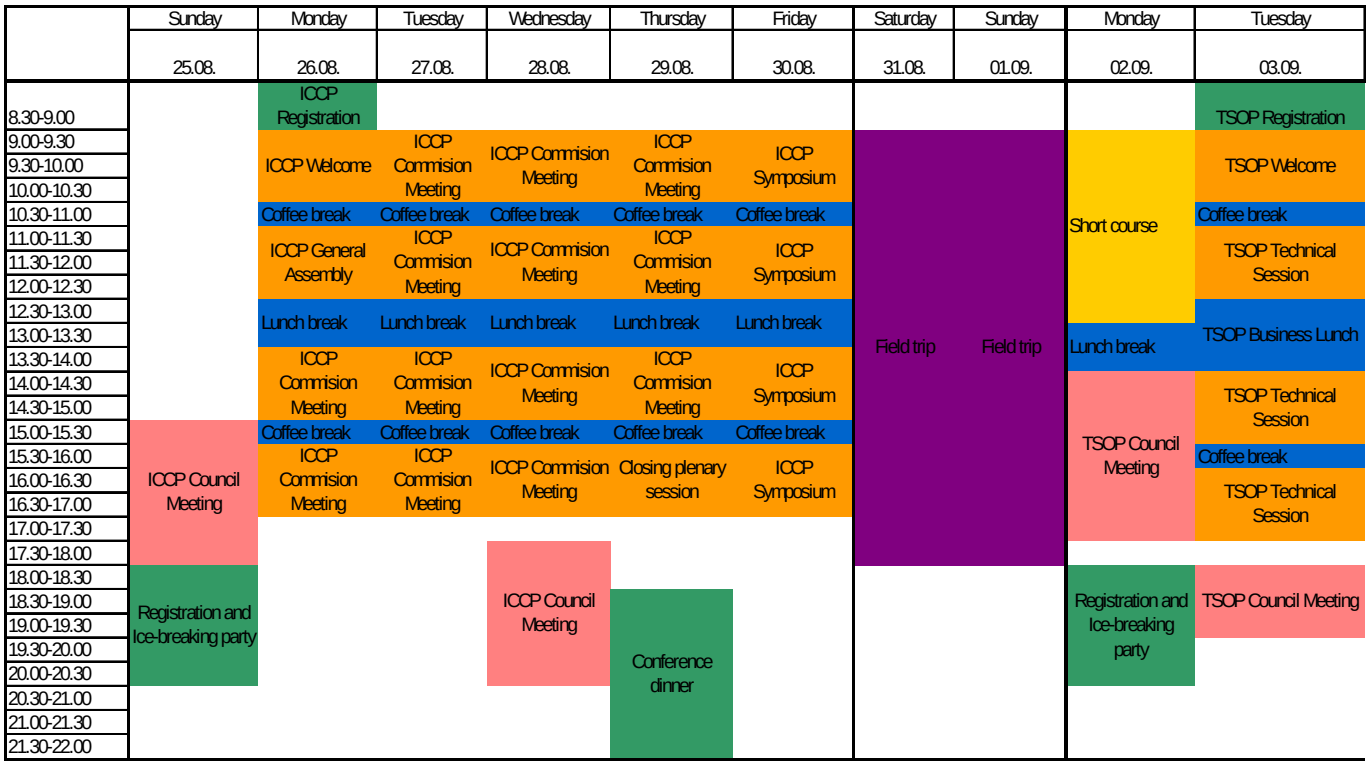
For help connected with accommodation and logistic information feel free to contact with Krzysztof Szopa:

mailto:kszopa@us.edu.pl

St. Mary's Basilica

Programme
65th Annual Meeting of ICCP and 30th Annual Meeting of TSOP



ICCP Programme Overview

Sunday 25/08/2013
15:00 - 18:00 Council Meeting
18:00 - 20:30 Registration and Ice Break Party

Monday 26/08/2013
08:30 - 09:00 Registration
09:00 - 10:30 ICCP welcome
10:30 - 11:00 Coffee Break
11:00 - 12:30 ICCP General Assembly
12:30 - 13:30 Lunch
13:30 - 15:00 ICCP General Assembly
15:00 - 15:30 Coffee Break
15:30 - 17:00 Commission II

Tuesday 27/08/2013
09:00 - 10:30 Commission II
10:30 - 11:00 Coffee Break
11:00 - 12:30 Commission II
12:30 - 13:30 Lunch
13:30 - 15:00 Commission II
15:00 - 15:30 Coffee Break
15:30 - 17:00 Commission III

Wednesday 28/08/2013
09:00 - 10:30 Commission III
10:30 - 11:00 Coffee Break
11:00 - 12:30 Commission III
12:30 - 13:30 Lunch
13:30 - 15:00 Commission III
15:00 - 15:30 Coffee Break
15:00 - 17:00 Commission I, including microscope session
17:30 - 20:30 Council Meeting

Thursday 29/08/2013
09:00 - 10:30 Commission I
10:30 - 11:00 Coffee Break
11:00 - 12:30 Commission I
12:30 - 13:30 Lunch
13:30 - 15:00 Commission I
15:00 - 15:30 Coffee Break
15:30 - 17:00 ICCP General Assembly
18:30 - 22:00 Conference Dinner

Friday 30/08/2013
ICCP Symposium

Saturday 31/08/2013
Field Trip

Sunday 1/09/2013
Field Trip

ICCP Detailed Programme

Sunday 25/08/2013

15:00 - 18:00 Council Meeting
18:00 - 20:30 Registration and Ice Break Party

Monday 26/08/2013

08:30 - 09:00 Registration
09:00 - 10:30 ICCP welcome

10:30 - 11:00 Coffee Break

11:00 - 12:30 **ICCP General Assembly**
1. Apologies for Non-attendance
2. Minutes of Previous Meeting
3. Arrangements for Sosnowiec Meeting
4. Future Meetings
5. Membership
6. Elections (short, status)
7. Editor's Report
8. Financial matters

12:30 - 13:30 Lunch

13:30 - 15:00 ICCP General Assembly
9. ICCP Accreditation program
10. ICCP Training Subcommittee

15:00 - 15:30 Coffee Break

15:30 - 15:45 **Commission II** Opening Remarks - P. Hackley & J. Kus
15:45 - 16:00 Thermal Indices - C. Araujo
16:00 - 16:45 Identification of Dispersed Organic Matter - J.Kus,
16:45-17:00 CBM/CO_2 Sequestration - L. Gurba

Tuesday 27/08/2013

09:00 - 9:45 Concentration of Organic Matter - J. G. Mendonça Filho
09:45 - 10:30 DOMVR Accreditation Program - A.G. Borrego

10:30 - 11:00 Coffee Break

11:00 - 11:45 Palynofacies - J.G. Mendonça Filho
11:45 - 12:30 Identification of Primary Vitrinite, P. Hackley

12:30 - 13:30 Lunch

13:30-14:00 Reappraisal of Pseudovitrinite - L. Gurba
14:00 - 14:30 Dispersed Organic Matter White Paper - M. Hamor-Vidó,
14:30 - 14:35 DOMVR and CIR in Commission II- A. G. Borrego
14:35 - 14:45 DOM Atlas - ICCP-TSOP - I. Suarez-Ruiz,
14:45 - 14:55 Shale Gas Studies - L. Gurba
14:55 - 15:00 Closing Remarks -P. Hackley, J. Kus

15:00 - 15:30 Coffee Break

15:30 - 15:45 **Commission III** Opening Remarks- I. Suárez-Ruiz & M. Misz-Kennan
15:45 - 16:15 Fly ash WG - I. Suarez-Ruiz, B. Valentim
16:15 - 17:00 Coke Reflectance Measurements - D. Pearson

Wednesday 28/08/2013

09:00 - 10:30 CBAP - I. Suarez-Ruiz

10:30 - 11:00 Coffee Break

11:00 - 11:50 Self-Heating WG. - M. Misz-Kennan, J. Kus, D. Flores
11:50 - 12:30 Coke Petrography WG - L. Johnson
12:30 - 13:30 Lunch

13:30 - 14:30 Carbon materials. G . Predeanu
14:30 - 15:00 Commission III Concluding Remarks - I. Suárez-Ruiz & M. Misz-Kennan

15:00 - 15:30 Coffee Break

15:30 - 15:40 **Commission I** Opening Remarks- D. Flores & S. Kalaitzidis
15:40 - 16:10 Quick scan technique - C. Hilgers
16:10 - 17:00 Microscope Session

17:30 - 20:30 Council Meeting

Thursday 29/08/2013

09:00 - 9:30 SCAP - Single Coal Accreditation Program- K. Christanis
09:30 - 9:55 Standardization Working Group - W. Pickel

09:55 - 10:10 ISO Standard-W. Pickel
10:10 - 10:30 Suberinite WG- P. Crosdale & A. Bouzinos

10:30 - 11:00 Coffee Break

11:00 - 11:20 Petrographic Image Database- J. Joubert, R. Delzepich, P. Ranasinghe & P. Hackley.
Demonstration of USGS Photomicrograph Atlas - B. Valentine
11:20-11:40 Reflectance and Terminology of Zooclasts in old sediments - T. Gentzis
11:40 - 12:10 New Methodologies and Techniques in Organic Petrology WG - L. Gurba
12:10 - 12:20 Micro FTIR WG - K. Jin
12:20 - 12:30 New Handbook Editorial Group - I. Sýkorová, I. Suárez Ruiz &K. Christanis

12:30 - 13:30 Lunch

13:30 - 13:45 QEMSCAN - S. Rodrigues
13:45 - 14:00 Liptinite Editorial Group - W. Pickel
14:00 - 14:10 Distinguishing Features of Macerals EG - W. Pickel
14:10 - 14:30 ICCP Electron Microprobe Handbook - L. Gurba
14:30 - 14:50 Oxidation WG - J. Kus & M. Misz-Kennan
14:50 - 15:00 Com I Closing Remarks- D. Flores & S. Kalaitzidis

15:00 - 15:30 Coffee Break

15:30 - 17:00 **ICCP General Assembly**

11. Registration
12. Revision of Statutes
13. Membership
14. Website
15. Elections
16. Short reports from Commission Meetings
17. Short report from the Council Meetings
18. Arrangements for 2014 Meeting
19. ICCP Awards
20. Other Matters
21. Closing remarks and vote of thanks

18:30 - 22:00 Conference Dinner

Friday 30/08/2013
ICCP Symposium

Saturday 31/08/2013
ICCP Field Trip

Sunday 1/09/2013
TSOP Field Trip

Field Trip - ICCP - Saturday 31st

The proposed stops of the conference's field trip are:

STOP 1
Ojców National Park (Polish: Ojcowski Park Narodowy) is a national park in Kraków County, Lesser Poland Voivodeship in southern Poland, established in 1956. It takes its name from the village of Ojców, where it also has its headquarters. Karst topography of soluble bedrock characterizes the park, which in addition to two river valleys (the Prądnik and Saspówka) contains numerous limestone cliffs, ravines, and over 400 caves.

STOP 2
Gnaszyn is a district of Częstochowa. It is a place where Jurassic clay deposits are used for brick production. The deposits are also interesting for geologist because of presence of numerous fossils (e.g. snails, ammonites, belemnites, wood) and spherosiderites with very well visible mineralization (e.g. calcite, aragonite, sphalerite, piryte).

STOP 3* (this stop depends)
The Olsztyn Castle. The first mention of "the castle Przymiłowice" (later Olsztyn) comes from 1306. It was built at the place where an early medieval castle had been before. Between 1349-59 it was enlarged at the initiative of Casimir the Great to defend the frontier of Silesia and Malopolska. In 1370 castle passed into the hands of Wladyslaw Jagiello. The Olsztynian fort is an example of a gothic building in the uplands style. Its design integrates limestone outliers and karst caves which categorises it as a cave castle.

STOP 4

Tarnowskie Góry. The city has the only one, underground touric path situated in a closed mine of silver in Poland. The path is located 40 m under the ground an is long for 1700 m. The rout is in shape of a triangle which every vertex is represented by shaft ("Anioł", "Żmija" and "Szczęść Boże").

Field Trip - TSOP - Sunday 1st

STOP 1

The Salt Mine in Wieliczka near Cracow (Kraków), Poland Wieliczkais a town in southern Poland in the Kraków metropolitan area, and situated (since 1999) in Lesser Poland Voivodeship; previously, it was in Kraków Voivodeship (1975–1998). The town was founded in 1290 by Duke Premislas II of Poland. Under the town is the Wieliczka Salt Mine – one of the world's oldest operating salt mines (the oldest is at Bochnia, Poland, 20 km (12 mi) from Wieliczka), which has been in operation since prehistoric times. The mine's attractions include dozens of statues, three chapels and an entire cathedral that has been carved out of the rock salt by the miners. The oldest sculptures are augmented by the new carvings by contemporary artists. About 1.2 million people visit the Wieliczka Salt Mine annually. http://www.kopalnia.pl/

STOP 2

Cracow- the city

Kraków (Cracow), is the second largest and one of the oldest cities in Poland. Situated on the Vistula River (Polish: Wisła) in the Lesser Poland region, the city dates back to the 7th century. Kraków has traditionally been one of the leading centres of Polish academic, cultural, and artistic life and is one of Poland's most important economic hubs. It was the capital of Poland from 1038 to 1569; the Polish–Lithuanian Commonwealth from 1569 to 1596; the Grand Duchy of Kraków from 1846 to 1918; and Kraków Voivodeship from the 14th century to 1999. It is now the capital of the Lesser Poland Voivodeship. In 1978, Karol Wojtyła, archbishop of Kraków, was elevated to the papacy as Pope John Paul II – the first Slavic pope ever, and the first non-Italian pope in 455 years. Also that year, UNESCO approved the first ever sites for its new World Heritage List, including the entire Old Town in inscribing Cracow's Historic Centre. Kraków is classified as a global city by GaWC, with the ranking of High sufficiency. http://www.krakow.pl/

Accommodation

Accommodation in hotel depends on participant's decision. The suggested hotels have a good quality and room's equipment. More details about the selected hotel and its offer you can find at their official web sites. All shown hotels' prices are given for primary orientation.

Hotel Qubus
(http://www.qubushotel.com/hotele.php?lang=2&id_h=10)
Short description: Rooms are provided with television, a mini bar, a safe, Internet connection which allows to use the Internet and phone at the same time. The hotel is located in the highest building in the directly city center in Katowice.
Orientational prices:
Single room 280zł (65 Euro)
Double room 330zł (77 Euro)
Junior Suite 400zł (93 Euro)

Hotel Katowice
(http://www.hotel-katowice.com.pl/?page_id=9)
Short description: The hotel offers 308 places in single, double rooms and apartments wit a higher standard. All our rooms have a bathroom, a telephone, a TV-set, the internet.
Orientational prices:
Single room 92zł (22 Euro)
Double room 182zł (43 Euro)

Hotel Diament
(http://www.hotelediament.pl/en.html)
Short description: The Park Diament Hotel Katowice **** is a modern, air-conditioned business hotel located at the motorway A4 in the city centre. Perfect location of the hotel makes it easily accessible from directions Kraków, Wrocław or Warszawa as well as from Pyrzowice and Balice airports. Spacious and modern hotel will live up to the expectations of even the most demanding guests. Business and More – customer programme introduced in the hotel – has been developed especially for those who travel in business, but it also offers convenient solutions for tourists
Orientational prices:
Single room comfort 299zł (70 Euro)
Double room comfort 344zł (80 Euro)

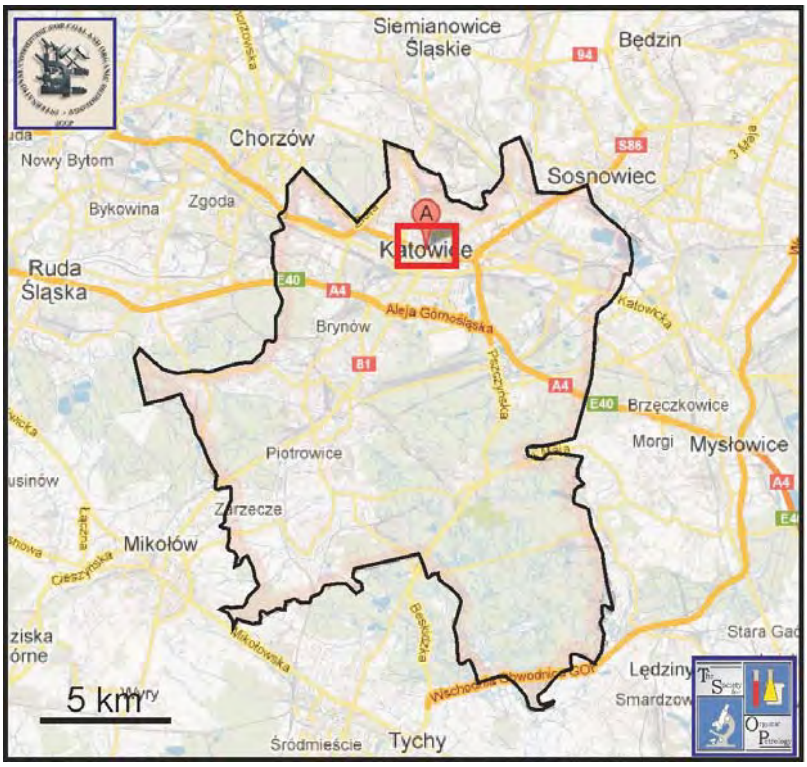
Hotel Monopol
(http://www.monopolkatowice.hotel.com.pl/mono_ka_en/Home)
Short description: All rooms have air conditioning, free access to the internet (broadband cables). In shared areas of the hotel, guests can also enjoy free access to WiFi. Bathroom floors feature underfloor heating. All bathrooms are finished in stone such as marble and boast elegant Italian fittings. Hotel guests are also free to use the hotel's fitness club, swimming pool, sauna and steam room located in the basement of the building. Guests also enjoy a 10% discount in the hotel's 2 restaurants, the café, 2 bars and room service.
Orientational prices (including breakfast):
Single room 490-560zł (114-130 Euro)
Double room 580-680zł (135-158 Euro)
Double room for single use: 535 - 635 zł (124-148 Euro)
Superior: 690 - 850 zł (160-197 Euro)
Junior Suite: 740 - 840 zł (172-195 Euro)
Apartment: 960 - 1200 zł (223-279 Euro)

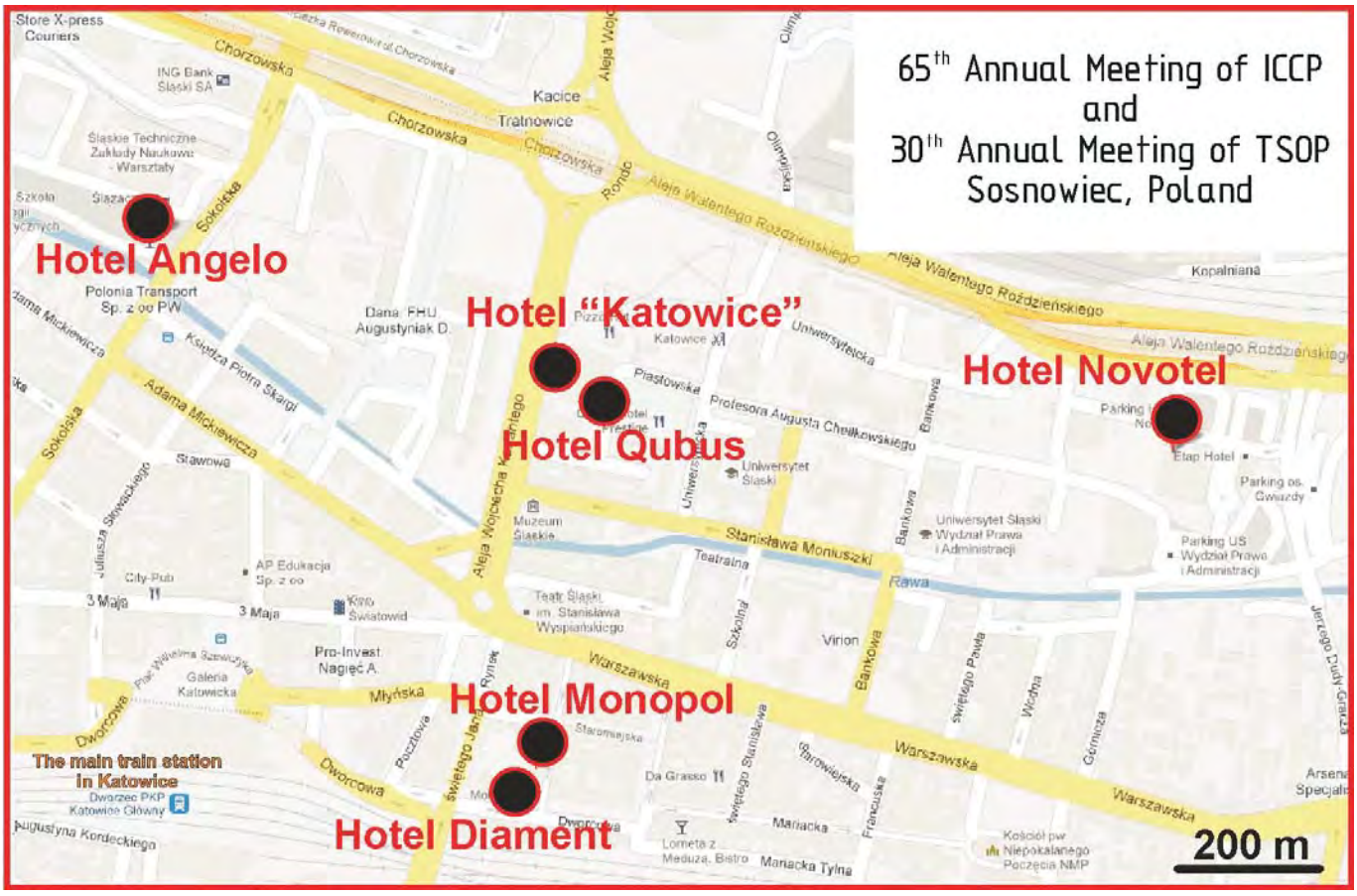
Hotel Angelo
(http://www.vi-hotels.com/en/angelo-katowice/rooms/)
Short description: Free access to the Executive corner equipped with PCs, printers, coffeemaker, mineral water and fresh fruits. Free WiFi internet access throughout the hotel and high-speed internet access in the room. Welcome drink and a sweet surprise. Early check in and late check out (upon availability). Free DVD rental at the reception desk. Bathrobe and slippers.
Orientational prices:
Single room 320 zł (74 Euro)
Double room 387 zł (90 Euro)

Novotel Katowice
(http://www.novotel.com/gb/hotel-3377-novotel-katowice-centrum/index.shtml)
Short description: The four-star Novotel Katowice Centrum hotel offers the highest quality services, perfect for business travellers and tourists alike. The hotel has 300 comfortable, air-conditioned rooms, a fitness club, swimming pool, sauna and a secure car park. The 16th Avenue restaurant guarantees a unique culinary experience while Le Bar serves original drinks and excellent coffee.
Orientational prices:
Single room 219 zł (51 Euro)
Double room 249 zł (58 Euro)

Superior: Single room 259 zł (61 Euro)
Double room 289 zł (68 Euro)

There is also possibility to book at quite low price a room in student's hostel in Sosnowiec. Rooms in students residences in Sosnowiec near Faculty of Earth Sciences are 40zł per night (ca. 10 Euro; in case of booking- please contact with Krzysztof Szopa: mailto: kszopa@us.edu.pl
mobile: +48 603 813 074





Fees for ICCP

	Before 30.06.2013	After 30.06.2013
ICCP Members	680 zł	830 zł
Students	400 zł	450 zł
Non-ICCP Members	880 zł	980 zł
Conference dinner	150 zł	150 zł
Field trip	250 zł	

Fees for TSOP

	Before 30.06.2013	After 30.06.2013
TSOP Members	680 zł	830 zł
Students	400 zł	450 zł
Non-TSOP Members	880 zł	980 zł
Conference dinner	150 zł	150 zł
Short course on application of organic petrology and geochemistry to environmental studies		
TSOP Members	150 zł	
Students	80 zł	
Non-TSOP Members	150 zł	
Field trip	250 zł	

The fee should by paid by using the University of Silesia account:

for Polish participants
name of Bank:
ING BANK ŚLĄSKI S.A.
Oddział w Katowicach
ul. A. Mickiewicza 3
Owner of account:
University of Silesia
ul. Bankowa 12
40-007 Katowice
74 1050 1214 1000 0007 0000 7909

for non-Polish participants
name of Bank:
ING BANK ŚLĄSKI S.A.
Oddział w Katowicach
ul. A. Mickiewicza 3
owner of account:
University of Silesia
ul. Bankowa 12
40-007 Katowice
IBAN: PL74 1050 1214 1000 0007 0000 7909
SWIFT: ING BP LPW

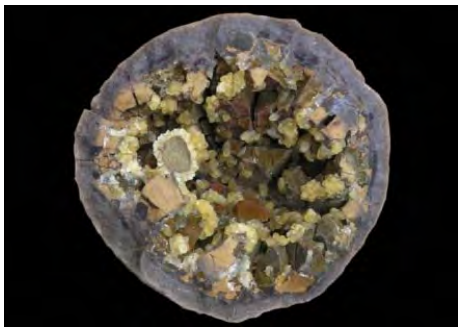
In all cases of payment in the title, please add: ICCP TSOP 2013

Travel

Participants coming to our meeting are suggested to use the Katowice Airport (which is situated in Pyrzowice) that is the nearest airport and is located 36 km from Katowice. The other airport is in Kraków, about 80 km from Katowice (so called the Balice Airport). Both of these airports have connections with all major airports in Europe. Participants can get to their hotels from the airports using public transport (buses to Katowice, buses and trains from Kraków) or taxis. The cost of taxi from the Katowice Airport to Katowice is 100 zł (about 25 Euro) and from the Kraków Airport to Katowice is about 320 zł (about 80 Euro). Both of the airports have official taxi companies. Participants coming from neighbouring countries can come by trains. The new and modern railway station is in the city centre.

The local communication is provided by KZK GOP in the whole Silesia district (including Katowice and Sosnowiec). You can use local trams and buses that should make your travel easy and quick. Some important information including actual time table and bus and tram's line location in the district you can find at http://www.kzkgop.com.pl

the Katowice Airport in Pyrzowice:
http://www.katowice-airport.com/
Kraków Airport in Balice:
http://www.krakowairport.pl/



Registration Form & Registration Pricing Information
For 65th Annual Meeting of ICCP & 30th Annual Meeting of TSOP

Full name…… Nationality……

Title…….. Affiliation ……..……..

Address……..……

Phone/fax…….. e-mail……..……..

Attend: ICCP…….. TSOP…….. ICCP & TSOP……

For ICCP attendee

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Report on Organic Matter Concentration Working Group (OMCWG 2010)

Convenor: João Graciano Mendonça Filho (UFRJ-Brazil)

1. Introduction:

The main objective of the Organic Matter Concentration WG was to study the effect of the isolation procedure on organic matter optical parameters. This third exercise of the WG consisted of the analysis of two samples with kerogen type I. The samples studied in this exercise were of low rank and the analyses performed were:

- Vitrinite reflectance of the whole-rock sample (WR);
- Vitrinite reflectance of the kerogen concentrate sample (KC);
- Spectral fluorescence analysis of liptinite in the whole rock sample (WR);
- Spectral fluorescence analysis of liptinite in the kerogen concentrate sample (KC);

This report includes results obtained by sixteen participants (Table 1) from 9 laboratories. The exercise was proposed in the Gramado Brazil ICCP meeting to continue the activities of the Organic Matter Concentration Working Group that began in 2008.

Table 1: List of Participants in the OMCWG.

Participant	Affiliation	Country
Araujo, Carla V.	Petrobras R&D Center	Brazil
Borrego, Angeles G.	INCAR-CSIC	Spain
Chagas, Renata B. A.	Federal University of Rio de Janeiro	Brazil
Cook, Alan	Keiraville Konsultants Pty. Ltd	Australia
Flores, Deolinda	University of Porto	Portugal
Hackley, Paul	U.S. Geological Survey	USA
Hower, Jim	University of Kentucky	USA
Kern, Marcio L.	Federal University of Rio de Janeiro	Brazil
Kus, Jolanta	Federal Institute for Geosciences and Natural Resources	Germany
Mastalerz, Maria	Indiana University	USA
Mendonça Filho, João G.	Federal University of Rio de Janeiro	Brazil
Mendonça, Joalice O.	Federal University of Rio de Janeiro	Brazil
Menezes, Taíssa R.	Petrobras R&D Center	Brazil
Ranasinghe, Paddy	Keiraville Konsultants Pty. Ltd	Australia
Souza, Igor V. A. F.	Petrobras R&D Center	Brazil
Suarez-Ruiz, Isabel	INCAR-CSIC	Spain

Previous exercises focussed on the study of samples containing terrestrial organic matter (Mendonça Filho *et al.*, 2008) and mainly marine organic matter (Mendonça Filho *et al.*, 2009) of different rank. The results of the OMCWG 2008 and 2009 are published in a paper titled: *Effect of concentration of dispersed organic matter on optical maturity parameters: Interlaboratory results of the organic matter concentration working group of the ICCP*: International Journal of Coal Geology (doi: 10.1016/j.coal.2010.07.005).

For the OMCWG 2010, the samples studied were composed of two outcrop carbonaceous lacustrine shales: one from USA (sample OMC5), Green River Formation (low rank, Type I-kerogen), Eocene age, Uinta Basin (Mahogany Ledge) and the other from Brazil (sample OMC6), Tremembé Formation (low rank, Type I kerogen), Oligocene age, Taubaté Basin.

The set of samples comprises 4 in total, numbered as follows:

Sample OMC5 (Green River Formation, Mahogany Ledge, USA): OMC5A = whole rock and OMC5B = kerogen concentrate

- Total Organic Carbon (TOC) is 6.44 wt.%
- The Hydrogen Index (HI) is 781 mg HC/g TOC and the Oxygen Index (OI) is 11 mg CO2/g TOC, indicating Type I kerogen (Figure 1);
- The T_{max} value (436°C) indicates that this sample is immature (low rank);
- The hydrocarbon source potential is very high (S2 = 54.96 mg HC/ g Rock) indicating excellent quality of organic matter for hydrocarbon generation.

Sample OMC6 (Tremembé Formation, Taubaté Basin, Brazil): OMC6A = whole rock and OMC6B = kerogen concentrate

- Total Organic Carbon (TOC) is 12.05 wt.%;
- The HI is 707 mg HC/g TOC and the OI is 12 mg CO2/g TOC, indicating Type I kerogen (Figure 1);

- The T_{max} value (436°C) indicates that this sample is immature (low rank);
- The hydrocarbon source potential is excellent (S2 = 94.75 mg HC/ g Rock) indicating excellent quality of organic matter for hydrocarbon generation.

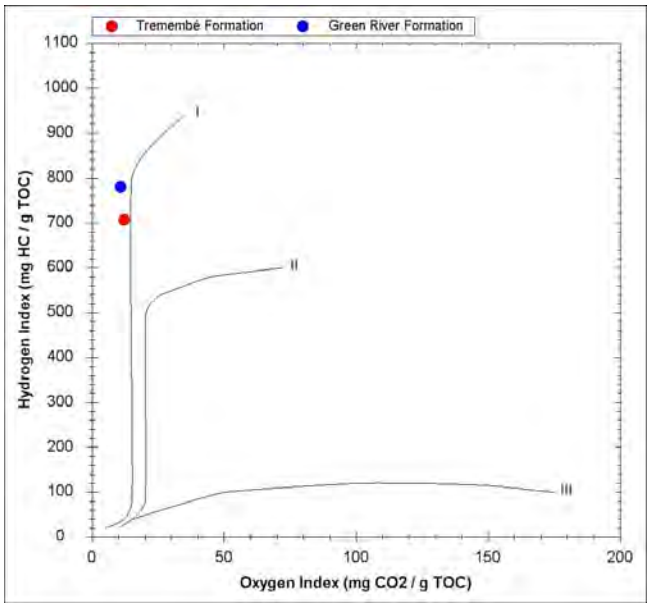


Figure 1 - Pseudo Van Krevelen plot (Espitalié et al., 1977) showing hydrogen and oxygen indices of samples from Green River and Tremembé formations.

2. Sample Preparation:

2.1. Whole-Rock Preparation Procedure:

Studied samples were ground to approximately 2 mm size and embedded in resin. A single block was prepared for each sample.

2.2. Kerogen Concentration Procedure:

Samples were ground to approximately 2 mm size. HCl (37%) was added to the sample for 18 hrs. Following HCl the sample was washed with distilled water until the effluent was neutral. In the next step HF (40%) was added for 24 hrs, followed by a neutral wash and addition of 37% HCl for 3 hrs to remove fluorides and a final neutral wash. Samples were floated using $ZnCl_2$ (ρ = 1.9 to 2 g/cm^3) and centrifuged to separate sulphides. Following centrifugation samples were washed with HCl (10%) plus distilled water to eliminate remaining heavy liquid and air-dried. The air-dried isolated kerogen was sieved (20 m) and embedded in resin (SERIFIX-STRUERS).

2.3. Sample Polishing:

Particulate blocks were ground using progressively finer grades of wet silicon carbide papers; including 800, 1200 and 4000 grit wet silicon carbide paper. A single set of samples was sent to each participating laboratory.

3. Statistical Evaluation Criteria and Parameters

Precision and bias assessment for the analysts: an evaluation of the suitability of the data for an accreditation program (based on Borrego et al. 2006) was used to interpret the reported data. This evaluation is based on the ICCP Accreditation Program for Vitrinite Reflectance Measurements on Dispersed Organic Matter described at **http://www.iccop.org/index.php?id=29**. The parameters considered in the accreditation program are:

UMSD: refers to participant's **U**nsigned **M**ultiple of the **S**tandard **D**eviation, calculated against the group mean and standard deviation data, for each sample analyzed as per the formula below:

$$UMSD = \left| \left(\frac{X_i - \overline{X}}{\sigma} \right) \right|$$

Xi = the participant vitrinite reflectance
X = the group mean vitrinite reflectance
σ = the standard deviation of the group

SMSD: refers to participant's **S**igned **M**ultiple of the **S**tandard **D**eviation, calculated against the group mean and standard deviation data, for each sample analyzed.

AUMSD and **ASMSD** are the average UMSD and SMSD values respectively for each participant. The AUMSD value is a measure of the participant's **accuracy** and the ASMSD is an indicator of the participant's **measurement bias** in the techniques being assessed. A threshold of 1.5 separates acceptable values from those departing too much from the group mean.

4. Results and Discussion:

The participants are identified by alphabetic letters (from A to P) in this report. Sixteen participants provided results based on standard vitrinite reflectance, and nine participants provided results based on spectral fluorescence analysis of liptinite macerals.

Table 2 shows the distribution of vitrinite

reflectance for the different samples as reported by the participants. In the exercise instructions participants were asked to provide "the maximum of measurements per sample". Despite this instruction around 70% of participants for sample OMC5 and 50% of participants for sample OMC6 provided fewer than 15 values (Table 2). Figure 2 shows that it was easier for participants to find appropriate particles to measure in samples from Tremembé Fm (OMC6A and OMC6B) than in Green River Fm. (OMC5A and OMC5B) and that it was easier to find particles in the whole rock than in the kerogen concentrate. This is reflected in the fact that participants generally reported similar or higher number of readings in the whole rock than in the kerogen concentrate. Although the number of readings reported is below the desirable amount for a sound statistical evaluation (e.g., Barker and Pawlewicz, 1993) they are considered sufficient for the study of the effect of the isolation procedure on the organic matter optical parameters in Type I-kerogen. Furthermore, it was observed a large variation in the number of readings by each participant in both samples, which indicate certain difficulties in the identification/selection of the vitrinite population.

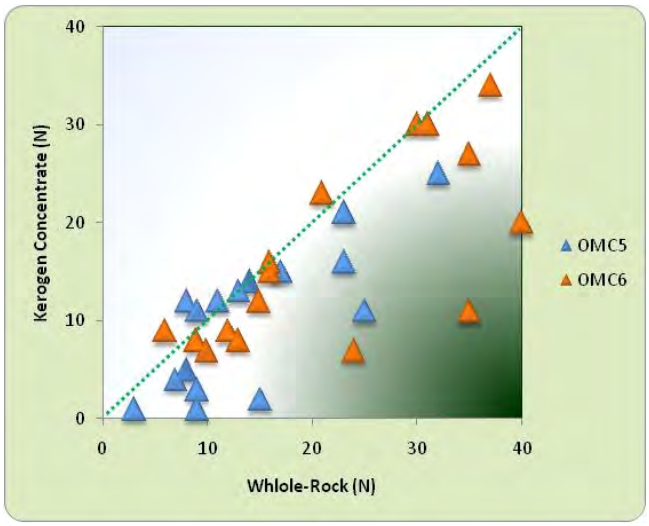


Figure 2: Comparison of number of readings for the WR and KC.

The average vitrinite reflectance value for whole-rock sample OMC5 was 0.38% and for kerogen concentrate was 0.37%. For sample OMC6, the result was 0.30% for whole-rock and 0.28% for kerogen concentrate (Plate 1). In general, the Standard Deviation (SD) values in both samples were low. It is remarkable that some participants reported SD below 0.03 even with reasonably high number of readings (Table 2).

Table 2: Distribution of vitrinite reflectance as reported by the participants.

Participant	OMC5A R_r (%)			OMC5B R_r (%)			OMC6A R_r (%)			OMC6B R_r (%)		
	R_r (%)	SD	N	R_r (%)	SD	N	R_r (%)	SD	N	R_r (%)	SD	N
A	0.43	0.09	8	0.42	0.07	5	0.24	0.03	24	0.24	0.02	7
B	0.28	0.07	14	0.30	0.08	14	0.22	0.04	16	0.20	0.03	16
C	0.40	0.03	15	0.39	0.03	2	0.38	0.01	35	0.37	0.01	11
D	0.39	0.09	8	0.39	0.04	12	0.26	0.03	21	0.25	0.03	23
E	0.27	0.06	23	0.29	0.06	16	0.29	0.05	31	0.26	0.05	30
F	0.38	0.07	7	0.35	0.06	4	0.27	0.04	12	0.23	0.02	9
G	0.35	0.06	3	0.30	0.00	1	0.27	0.03	9	0.27	0.01	8
H	0.55	0.07	9	0.55	0.12	3	0.23	0.04	6	0.22	0.01	9
I	0.54	0.05	23	0.48	0.03	21	0.47	0.02	40	0.46	0.01	20
J	0.39	0.01	13	0.36	0.02	13	0.36	0.01	16	0.36	0.01	15
K	0.30	0.08	11	0.34	0.07	12	0.26	0.05	35	0.22	0.04	27
L	0.29	0.06	9	0.26	0.00	1	0.21	0.04	10	0.20	0.04	7
M	0.31	0.05	25	0.32	0.07	11	0.27	0.06	30	0.27	0.07	30
N	0.34	0.11	32	0.29	0.08	25	0.28	0.07	37	0.26	0.08	34
O	0.45	0.10	9	0.41	0.10	11	0.40	0.02	15	0.32	0.04	12
P	0.39	0.01	17	0.39	0.01	15	0.34	0.01	13	0.37	0.01	8
Average	0.38			0.37			0.30			0.28		
SD	0.08			0.08			0.07			0.07		

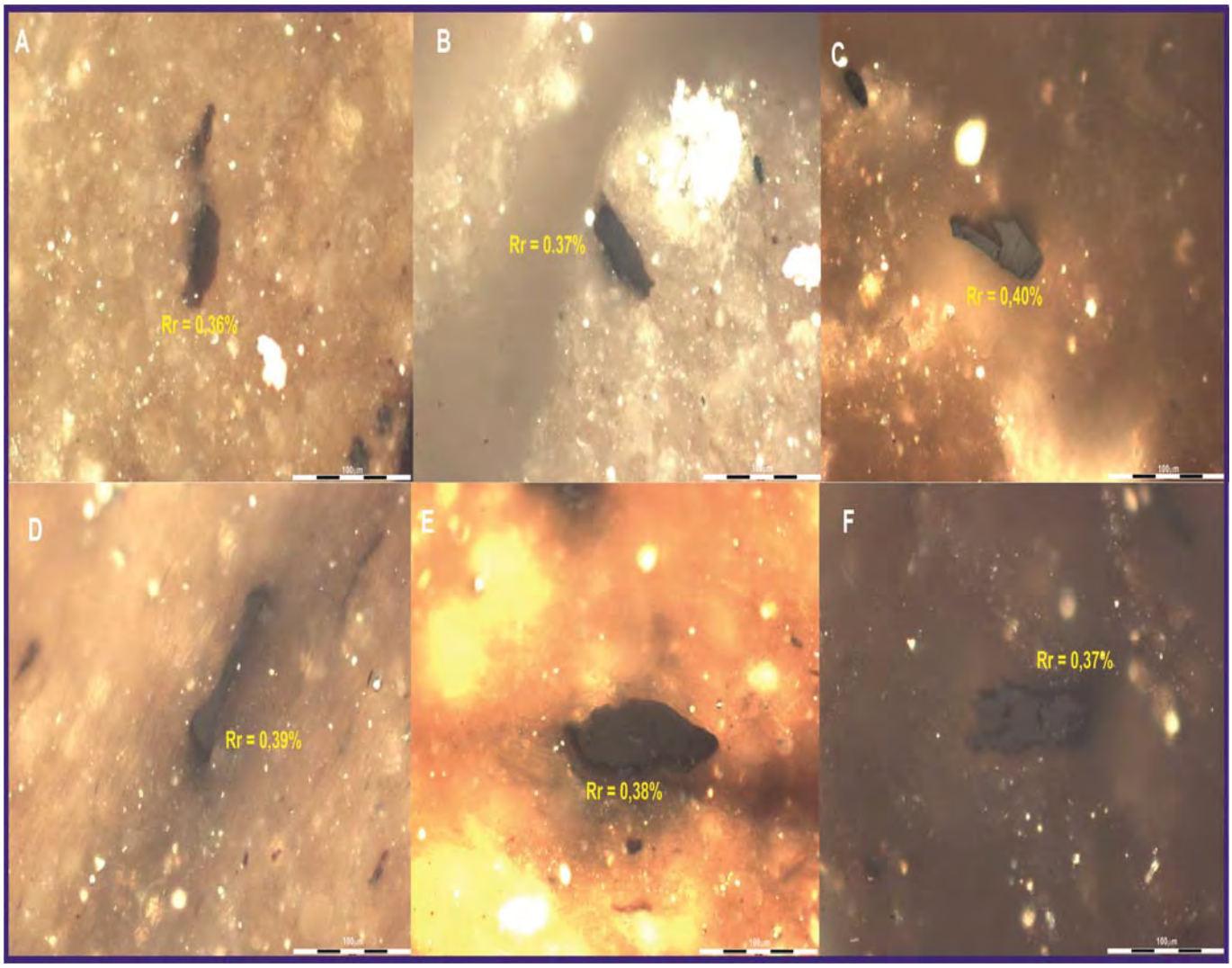


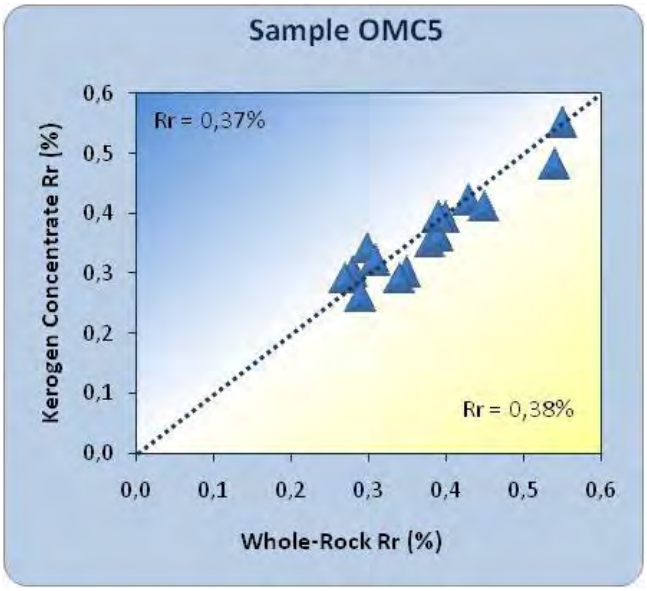
Plate 1: Examples of vitrinites. A-B) Sample OMC5A; C) Sample OMC5B; D-E) Sample OMC6A; F) Sample OMC6B. All photomicrographs were taken under white incident light, oil immersion.

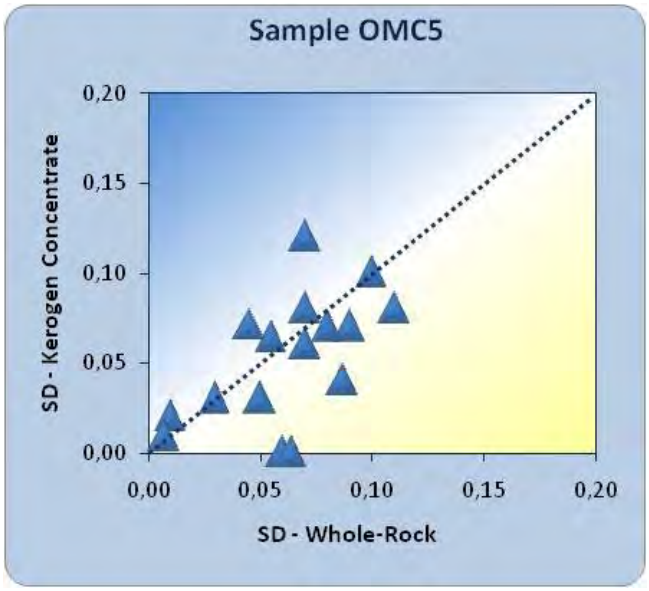
The graph of kerogen vs whole rock vitrinite reflectance values (Figure 3) allows comparison of results from the whole-rock and the kerogen concentrate samples. If the x and y axes have the same dimensions and the results were equivalent, all the points should be on the linear regression or closer. In both samples the reflectance tended to be slightly higher in the whole-rock, where it can be observed clearly that most of the points are slightly below the linear regression.

Standard Deviations in reflectance values between WR and KC are shown in Figure 4. If SD values were always higher in one than in the other, this would indicate a greater difficulty to identify the population of measurable particles. The graphs show larger SD in sample OMC5 than in sample OMC6 and also larger differences in SD between the WR and the KC for OMC5. In sample OMC5 the SDs scattered quite randomly around the linear regression, except for a couple of values (participants G and L who only reported one reading having SD=0). In sample OMC6 the SDs tended to be slightly higher in the WR than in the KC.

In general, low values of SD were observed in the two analyzed samples; however results from sample OMC5 contained a larger scatter of the readings, which could indicate more difficulty to identify the vitrinite particles in sample OMC5 than in sample OMC6.

The scatter of results also is observed in Figures 5 and 6 where mean reflectance reported by each participant is plotted with error bars corresponding to the individual standard deviation (SD). The scatter of the results is reasonable and most of the values are within the 1.5SD threshold of the ICCP Accreditation criteria.





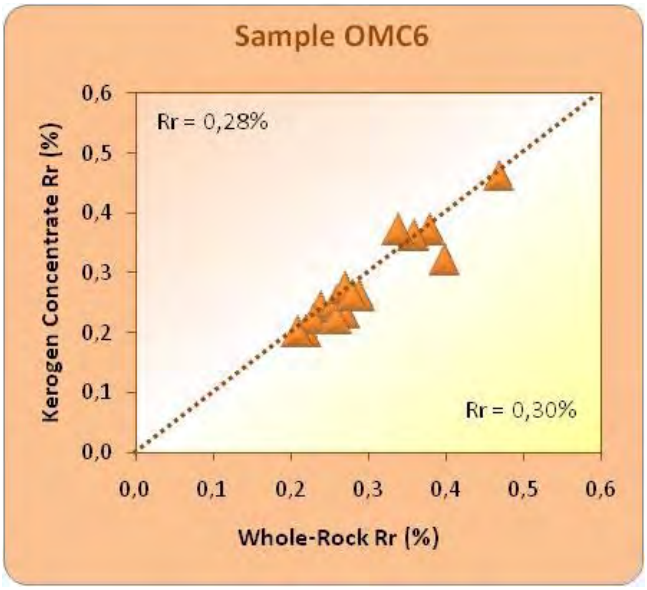


Figure 3: Comparison of mean reflectance values between WR and KC.

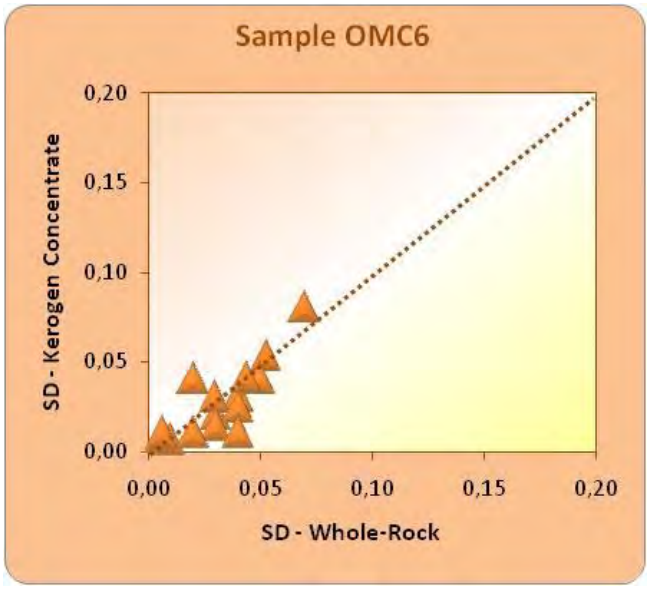


Figure 4: Comparison of standard deviation (SD) between WR and KC. (Scatter of data in the analyzed samples)

The average reflectance considering all data was 0.38% for sample OMC5A (Whole-Rock) and 0.37% for sample OMC5B (Kerogen Concentrate). Participant H reported values higher than 1.5SD of the group mean in both samples and Participant I reported values higher than 1.5SD of the group mean in sample OMC5A (WR) (Figure 5). Some participants noted the presence of two vitrinite populations in sample OMC5, the higher of which the average reflectance was around 0.60% (Figure 6). However, one participant reported the presence of a low reflecting inertinite population (0.45%) in the same sample suggesting those particles could just as well be interpreted as vitrinite (Figure 7).

The high reflectance values measured by participants H and I with low SD could indicate that they refused to measure the low reflecting population measured by most of the participants. Participant H reported slight orange fluorescence in the low reflecting population indicating a perhydrous character. This could have been the reason for refusing the measurement of the low reflecting population with mean values around 0.35% (Figure 8).

The group mean considering all the data was 0.30% for sample OMC6A (Whole-Rock) and 0.28% for sample OMC6B (Kerogen Concentrate) (Figure 9). Participant I reported values higher than the group mean plus 1.5SD in both samples.

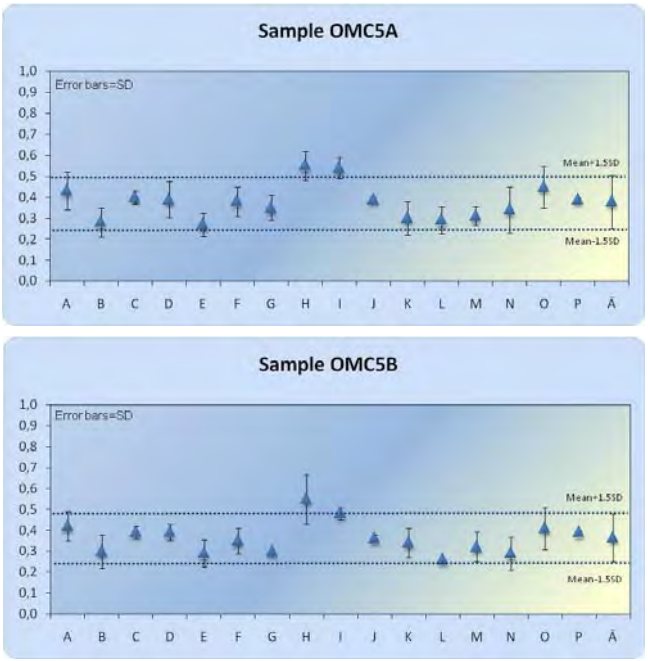


Figure 5: Average Rr (%) values for samples OMC5A (Whole-Rock) and OMC5B (Kerogen Concentrate).

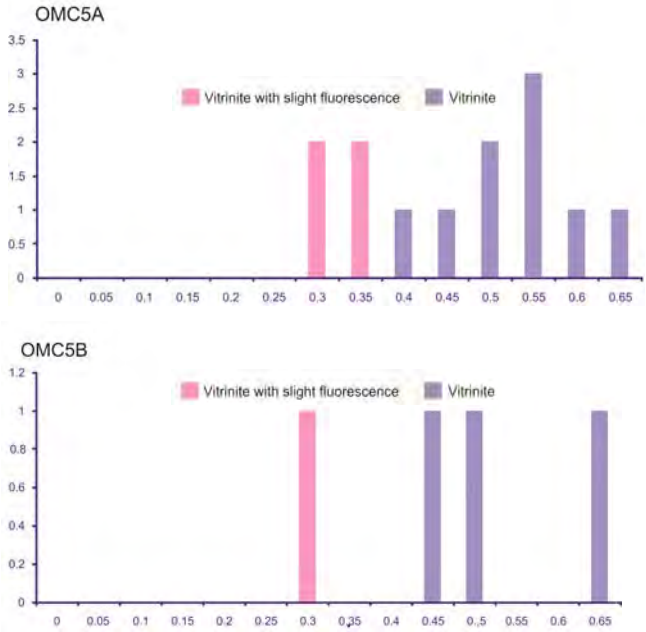


Figure 8: Histograms showing a low reflecting vitrinite population in samples OMC5A (WR) and OMC5B (KC) measured by the participant H.

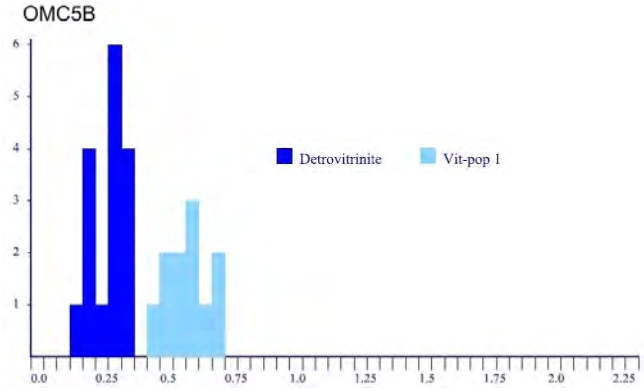


Figure 6: Histogram showing a high reflecting vitrinite population in sample OMC5B (KC).

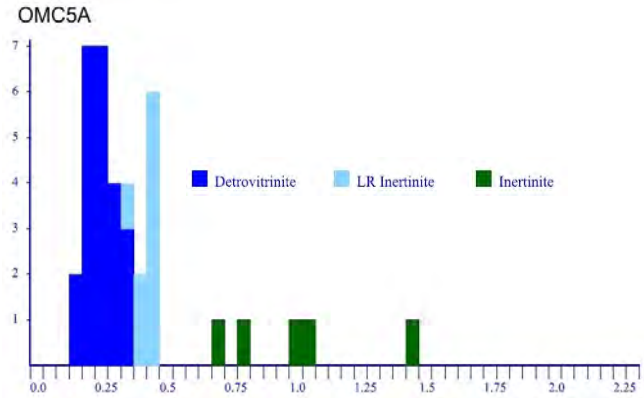


Figure 7: Histogram showing a low reflecting inertinite population in sample OMC5A (WR).

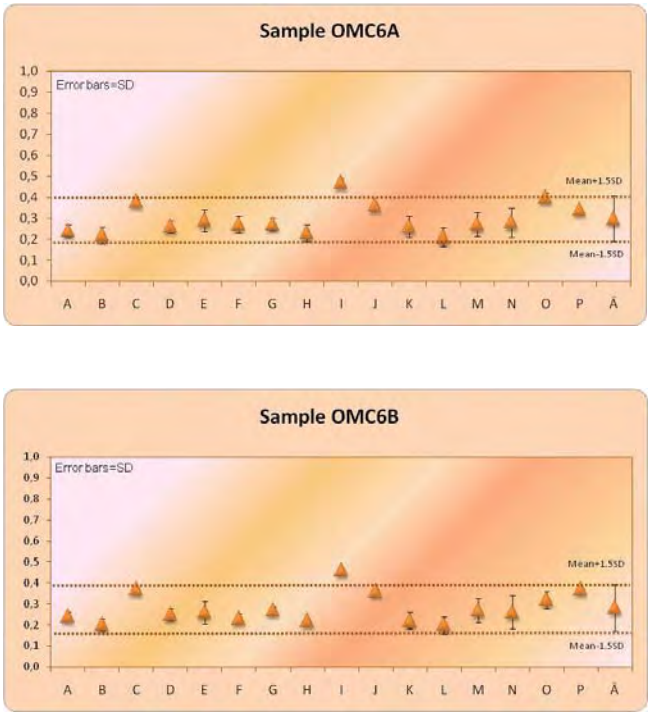
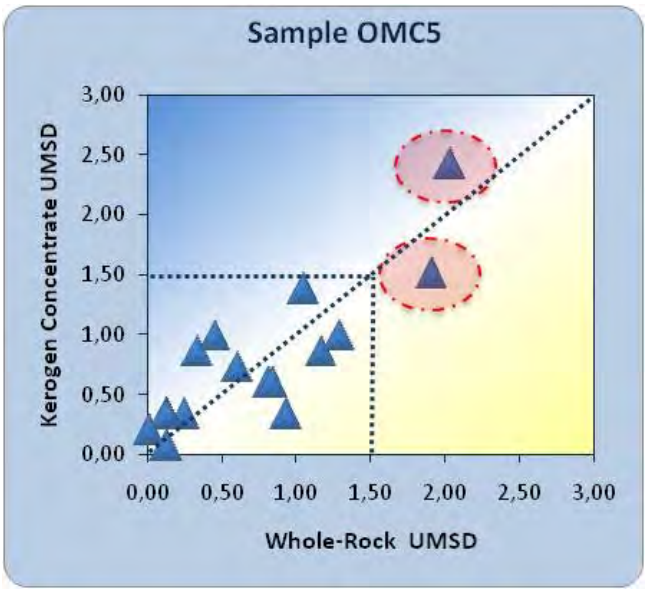


Figure 9: Average R_r (%) values for samples OMC6A (Whole-Rock) and OMC6B (Kerogen Concentrate).



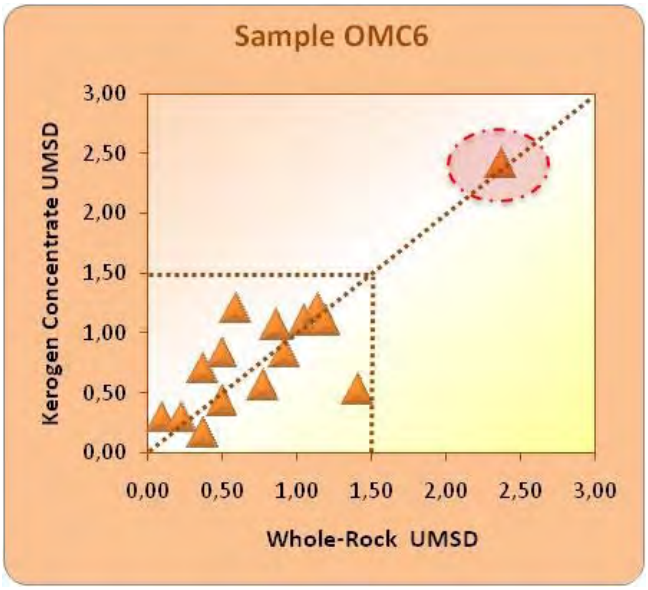


Figure 10: UMSD (Unsigned Multiple of the Standard Deviation)[1].

In Figure 10 it can be observed that in general the UMSD of participants were evenly dispersed around the linear regression in samples OMC5 and OMC6. In sample OMC5 two analysts (Participants H and I) presented results outside of the threshold considered acceptable for precision (±1.5SD of the group mean) in both the KC and the WR samples. In sample OMC6, only Participant I presented results departing more than 1.5SD of the group mean.

Using the criteria and parameters applied for the DOMVR ICCP accreditation program, www.iccop.org, (Table 4), good results were obtained in this exercise (Table 5). Nevertheless this assessment does not address the problem of selecting different vitrinite populations. Two participants had an AUMSD value over 1.5 and one participant had a very high ASMSD value, probably related to problems with vitrinite identification. The majority of participants presented consistent results and their analytical techniques were acceptable.

Table 4: Coal Reflectance Analysis Criteria (ICCP).

Parameters	Precision and bias for the analysts	
ASMSD	< ± 0.5	Low
	± 0.5 < ± 1.0	Medium
	± 1.0 < ± 1.5	High
	> ± 1.5	Very High
AUMSD	< 1.5	Your analytical technique is acceptable
	> 1.5	Your analytical technique is not acceptable

Table 5: Accuracy of results calculated against the group mean and standard deviation data, for each sample analyzed: SMSD (Signed Multiple of the Standard Deviation), AUMSD and ASMSD.

Particpant	SMSD	AUMSD	ASMSD	Remarks (bias)
A	-0.32	0.68	-0.08	Low
B	-4.56	1.14	-1.14	High
C	2.64	0.66	0.66	Medium
D	-0.79	0.35	-0.20	Low
E	-3.02	0.76	-0.76	Medium
F	-1.58	0.40	-0.40	Low
G	-2.07	0.52	-0.52	Medium
H	2.46	1.58	0.62	Medium
I	8.02	2.00	2.00	Very High
J	1.70	0.51	0.43	Low
K	-2.95	0.74	-0.74	Medium
L	-4.71	1.20	-1.20	High
M	-2.28	0.57	-0.57	Medium
N	-2.32	0.58	-0.58	Medium
O	3.11	0.78	0.78	Medium
P	1.96	0.49	0.49	Low

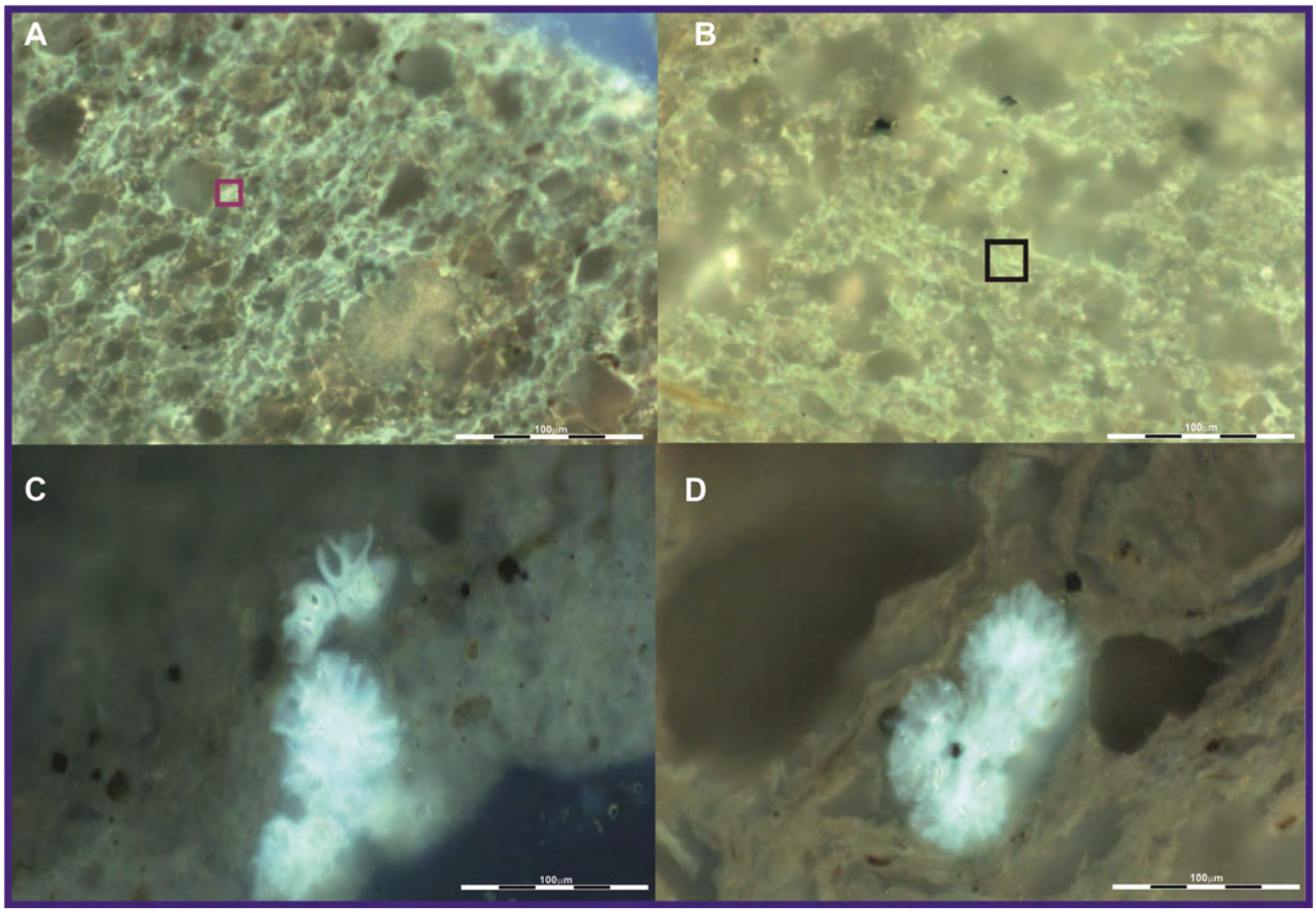
[1]calculated against the group mean and standard deviation data

5. Spectral fluorescence analysis:

Nine participants provided results on spectral fluorescence measurements. Nine participants gave spectral curves for Unstructured Fluorescing Organic Matter (AOM, Plate 2, Photos A and B) of the Green River Fm. (OMC5). For sample OMC6 (Tremembé Fm.) seven participants provided results for telalginite (Botryococcus algae, Plate 2, Photos C and D) and three participants provided results for lamalginite. This will not allow comparison of the fluorescence properties of a single component in both samples but does allow investigation of the effect of kerogen isolation on fluorescence parameters. In general, the λ_{max} results for sample OMC5 confirm the low rank of Green River Fm. (Table 6 and Figure 11). There was no pattern in the spectral fluorescence results for the samples OMC5A (WR) and OMC5B (KC) (Table 6, Figure 12). In general, the results of vitrinite reflectance equivalent calculated from the spectral fluorescence, based on Mukhopadhyay (1994), are higher than the values from measured vitrinite reflectance (Table 7).

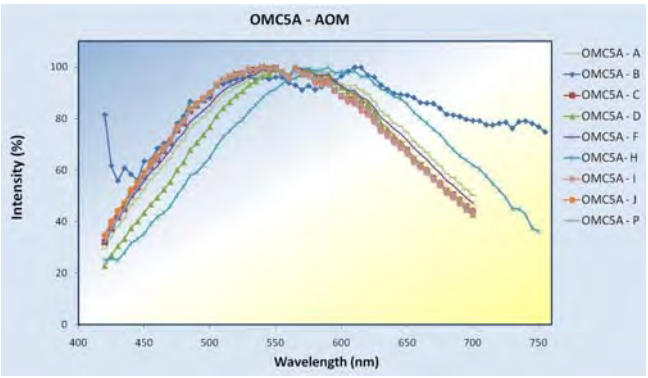
Table 6: Spectral fluorescence parameters obtained for Green River Fm. (OMC5).

Participant	OMC5A (AOM) λ (nm)	OMC5B (AOM) λ (nm)
A	565	565
B	610	530
C	540	564
D	565	565
F	565	565
H	590	575
I	540	565
J	540	550
P	540	540



Plates 2: A) Sample OMC5A: Unstructured fluorescing organic matter (AOM); B) Sample OMC5B: Unstructured fluorescing organic matter (AOM); C) Sample OMC6A: Telalginite (*Botryococcus* algae); D) Sample OMC6B: Telalginite (*Botryococcus* algae) and Lamalginite. All photomicrographs were taken under fluorescence mode.

In the case of sample OMC5A (WR), these results suggest that unstructured fluorescing organic particles (AOM) are not appropriate for this analysis, probably owing to that fluorescing groundmass can be derived from degraded algal material and/or bacterial biomass and commonly appear intimately intermixed with mineral groundmass (Plate 2). Other option is that vitrinite reflectance is suppressed as commonly reported in organic-rich rocks. Alternatively, the results could indicate the wrong selection of the vitrinite population measured because estimated vitrinite reflectance values are closer to those of the high reflecting population selected by some participants, and refused for measurement by others (Table 2). For sample OMC5B (KC) besides the differing origin of organic particles, results could have been affected by the kerogen isolation procedure as reported in Mendonça Filho et al. (2009, 2010).



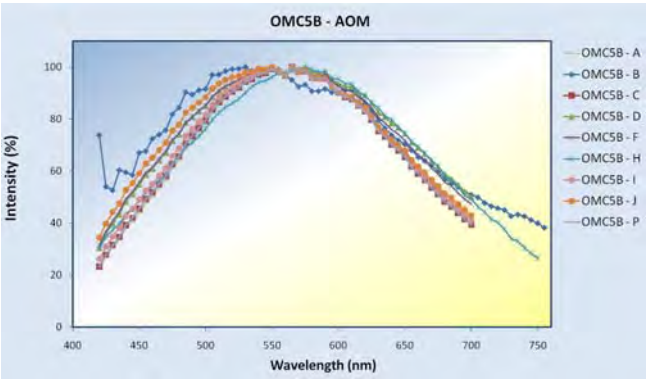


Figure 11: Spectral curves for AOM of samples OMC5A and OMC5B.

Table 7: Correlation between SF and Rr% (Equivalent and Measured) parameters for Green River Fm. (OMC5).

OMC5A (AOM) λ (nm)	Equivalent R_r	Measured R_r	OMC5B (AOM) λ (nm)	Equivalent R_r	Measured R_r
565	0.57		565	0.57	
610	0.88		530	0.43	
540	0.50		565	0.57	
565	0.57	Mean = 0.38	565	0.57	Mean = 0.37
565	0.57		565	0.57	
590	0.70	SD = 0.08	575	0.61	SD = 0.08
540	0.50		565	0.57	
540	0.50		550	0.53	
540	0.50		540	0.50	
Mean	**0.59**		**Mean**	**0.55**	
SD	**0.13**		**SD**	**0.05**	

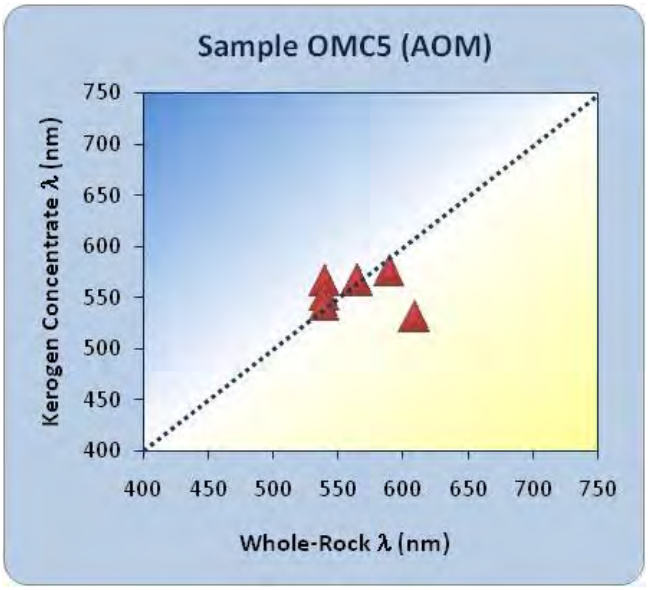


Figure 12: Comparison of λ_{max} values between OMC5A (WR) and OMC5B (KC).

For Tremembé Fm. sample OMC6 the results are represented in Table 8. Plate 2 shows examples of telalginite (*Botryococcus* algae).

The λ_{max} results for sample OMC6 confirm the low rank of Tremembé Fm. Some participants provided results from telalginite (Figure 13) and lamalginite (Figure 15). In general, a shift of max to higher values for sample OMC6B was observed. The difference in values is more apparent when the fluorescence spectra are measured in the lamalginite component (Table 8). These results suggest that the preparation procedures affect fluorescence properties (Table 8) as observed by Mendonça Filho *et al.* (2009, 2010).

Table 8: Spectral fluorescence parameters obtained for Tremembé Fm. (OMC6).

Participant	OMC6A *Telalginite Botryococcus* λ (nm)	OMC6A *Lamalginite* λ (nm)	OMC6B *Telalginite Botryococcus* λ (nm)	OMC6B *Lamalginite* λ (nm)
A	510		515	
B		505		610
C	530		530	
D	505		520	
F	510		520	
H	515	515	510	575
I		520		565
J	510		530	
P	530		530	

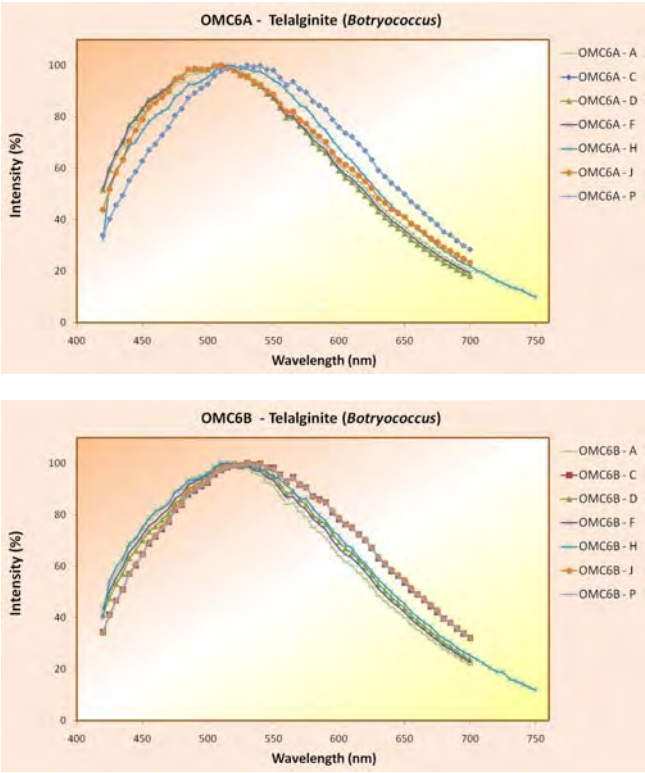


Figure 13: Spectral curves for telalginite of samples OMC6A and OMC6B.

For the single participant measuring both lamalginite and telalginite (participant H) the spectra of lamalginite had a similar λ_{max} value to that of telalginite (Figures 13 and 15 and Table 8). In addition those participants reporting only spectra on lamalginite (participants B and I) measured spectra similar to that of participant H and within the range of the spectra obtained for telalginite by the rest of the participants. Accordingly, the estimated vitrinite reflectance using both telalginite and lamalginite for the OMC6A sample was similar (Tables 9 and 10). In the case of OMC6B a different situation is observed. The telalginite spectra were slightly shifted to higher wavelengths compared to OMC6A telalginite, whereas the lamalginite spectra were strongly shifted to the red compared to OMC6A lamalginite spectra

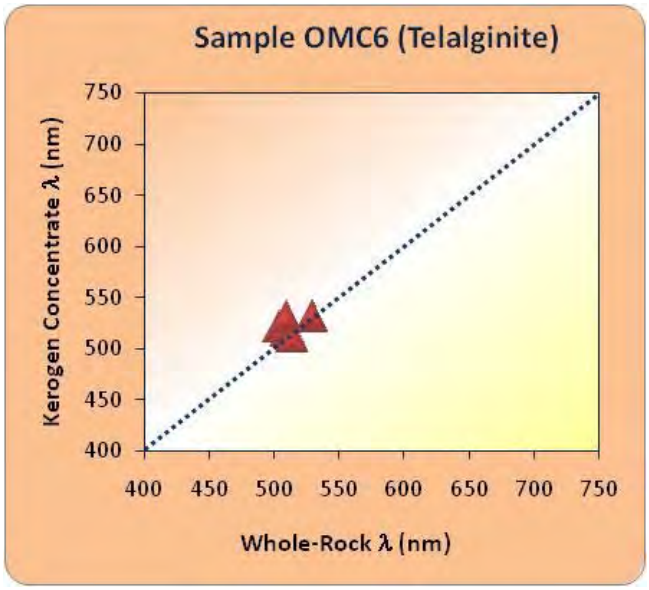


Figure 14: Comparison of λ_{max} values between OMC6A (WR) and OMC6B (KC) samples using Telalginite as object of measured

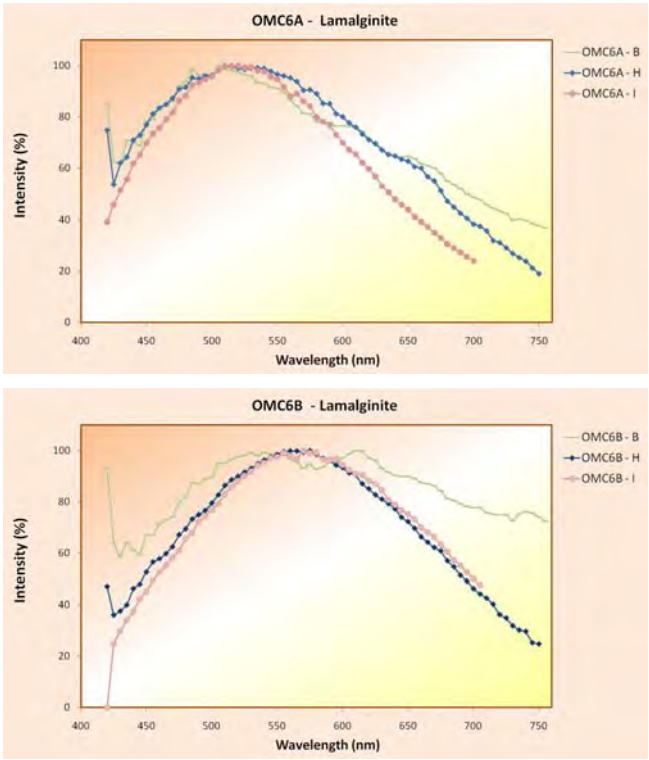


Figure 15: Spectral curves for lamalginite of samples OMC6A and OMC6B.

Figures 14 and 16 show the comparison of λ_{max} values between OMC6A (WR) and OMC6B (KC)

using telalginite and lamalginite as the object of measurement, respectively. For telalginite (Figure 14), all of the points are on the median, indicating that λ_{max} values were practically the same in the KC and WR. For lamalginite (Figure 16), all points are above the median, indicating that λ_{max} values were higher in the KC than in WR.

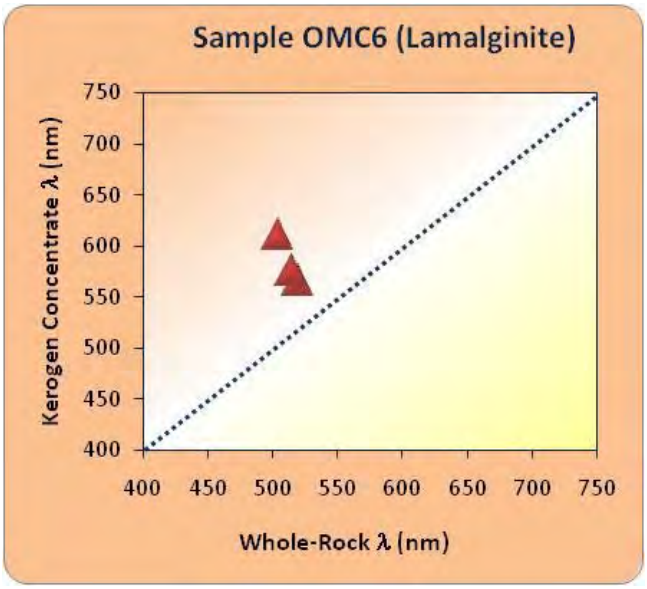


Figure 16: Comparison of λ_{max} values between OMC6A (WR) and OMC6B (KC) samples using lamalginite as the object of measurement.

Figure 17 indicates that both telalginite and lamalginite in sample OMC6 were affected by the isolation procedure, although telalginite showed only a slight red shift in the spectra and a slight increase in estimated vitrinite reflectance, whereas the effect was much stronger in lamalginite. If the measured data for vitrinite reflectance are compared to those calculated from λ_{max} of the fluorescence spectra the following observations are derived:

- The equivalent vitrinite reflectance for sample OMC6, using telalginite as the object of measurement (Table 9), presents a reasonable correlation with the average measured vitrinite reflectance, although the calculated values tended to be slightly higher (Figure 17);
- For sample OMC6B the misfit between equivalent vitrinite reflectance and average measured vitrinite reflectance was higher and calculated values were higher than measured ones (Figure 17), especially when lamalginite was used to obtain the spectra;
- For samples from Green River Fm. a similar result was obtained. Calculated values were higher than measured values for each participant. This can be seen in Figure 18. The effect would have been even higher if reflectance values of all participants could have been considered because those participants measuring spectra reported the highest values for vitrinite reflectance in Table 2.

Table 9: Correlation between SF and R_r% (Equivalent and Measured) parameters for Tremembé Fm. (OMC6) (Telalginite).

OMC6A Telalginite λ(nm)	**Equiv-alent R_r**	**Meas-ured R_r**	**OMC6B Telalginite λ(nm)**	**Equiv-alent R_r**	**Meas-ured R_r**
510	0.33		515	0.35	
530	0.43		530	0.43	
505	0.31		520	0.38	
510	0.33	Mean = 0.38	520	0.38	Mean = 0.37
515	0.35		510	0.33	
510	0.33	SD = 0.08	530	0.43	SD = 0.08
530	0.43		530	0.43	
Mean	**0.36**		**Mean**	**0.39**	
SD	**0.05**		**SD**	**0.05**	

Table 10: Correlation between SF and Rr% (Equivalent and Measured) parameters for Tremembé Fm. (OMC6) (Lamalginite).

OMC6A Lamalginite λ(nm)	**Equi v-alent R_r**	**Meas-ured R_r**	**OMC6B Lamalginite λ(nm)**	**Equi v-alent R_r**	**Meas-ured R_r**
505	0.31	Mean = 0.30	610	0.88	Mean = 0.28
515	0.35	SD = 0.07	575	0.61	SD = 0.07
520	0.38		565	0.57	
Mean	**0.35**		**Mean**	**0.69**	
SD	**0.04**		**SD**	**0.17**	

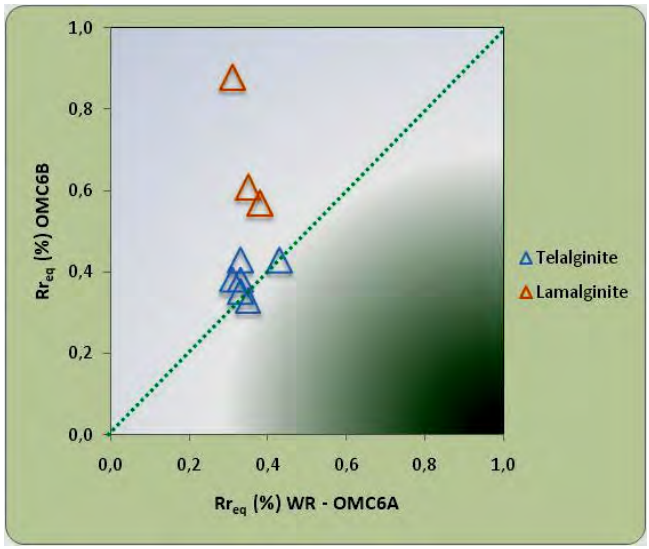
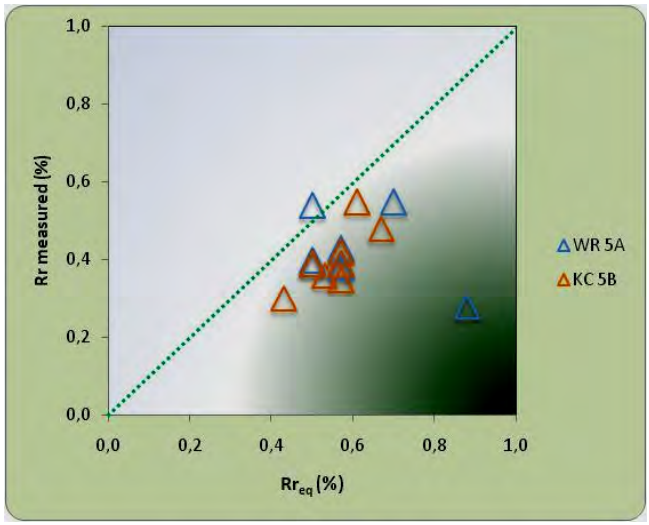


Figure 17: Comparison of equivalent R_r estimated from telalginite and lamalginite for both the whole rock and the kerogen concentrate in sample OMC6.



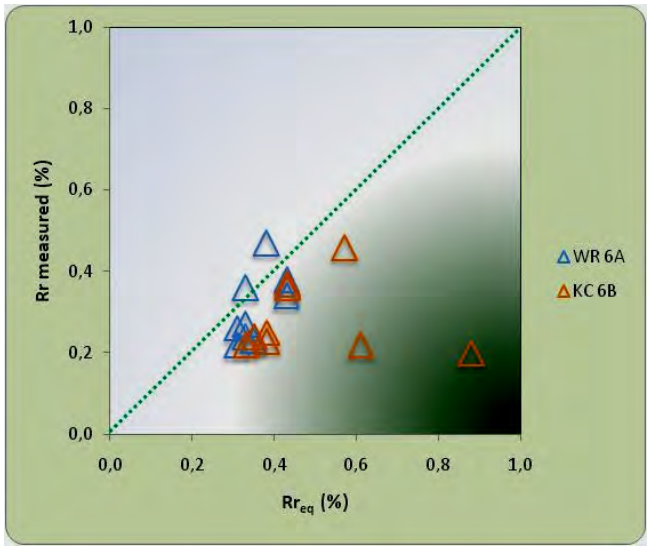
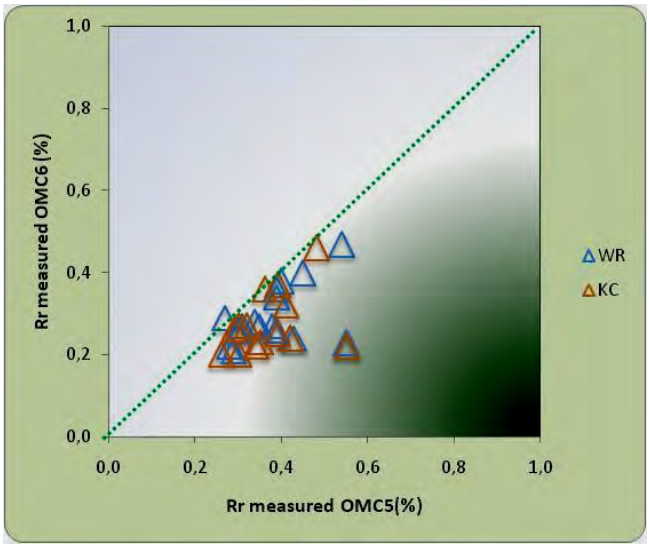


Figure 18: Comparison of equivalent R_r estimated from alginite and the measured values for both the whole rock and the kerogen concentrate in samples OMC5 and OMC6. Only the values for those reporting spectra are plotted.

6. Differences in maturity between samples as derived from optical parameters.

The two samples analyzed were low rank Type I organic matter samples. The results obtained from both samples for the different optical parameters overlap to some extent. To check which sample is more mature Figure 19 plots measured vitrinite reflectance and calculated reflectance from spectral data. In both cases, values were higher in the Green River sample (OMC5) than in the Tremembé sample (OMC6), indicating a higher maturity for the former according to the averaged values reported in Table 2.



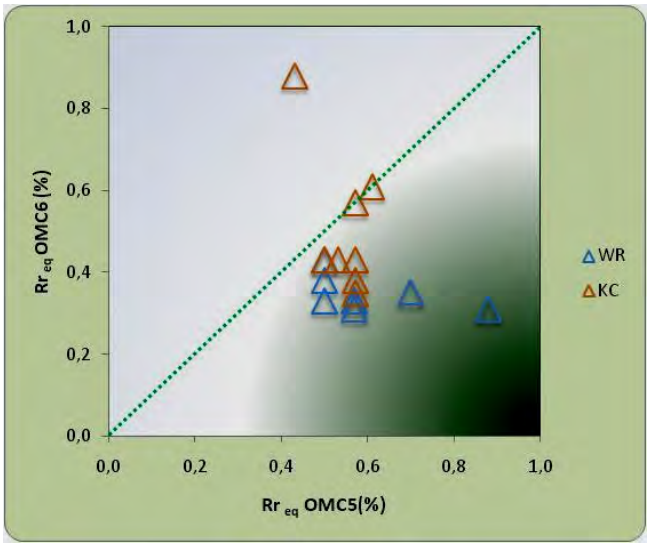


Figure 19: Comparison of the maturity of the two samples analysed based on the measured vitrinite reflectance and on the calculated vitrinite reflectance using spectral data.

7. Conclusions:

Based on the proposed objectives and results obtained in the studied samples for OMCWG 2010, it is concluded that Type I kerogen samples yield a lower amount of vitrinite than Type II and Type III kerogen samples (OMCWG 2009 and 2008, respectively).

Samples OMC5A and OMC5B (Green River Fm.) and OMC6A and OMC6B (Tremembé Fm.) showed a low to moderate amount of measurable vitrinite particles. This resulted in a large variation in the number of readings by each participant in both samples. The reported values were considered robust enough for the assessment of the effect of the isolation procedure on vitrinite reflectance of the samples.

In general, the Standard Deviation (SD) values in both samples were low and the scatter of the readings was small. However, the results for the Green River sample (OMC5) indicated that participants were measuring different vitrinite populations. This suggests greater difficulty to identify vitrinite particles in sample OMC5 than in sample OMC6. Specific instructions to select the vitrinite population in this sample are required. In the Tremembé sample (OMC6) the presence of two vitrinite populations was not evident from the data, although some scatter is also observed.

Spectral fluorescence results showed that λ_{max} values for sample OMC5 and OMC6 confirm a low rank for both samples. In general, the calculated vitrinite reflectance values using Mukhopadhyay (1994) were higher than the measured values for those participants providing both reflectance and fluorescence results. This could indicate suppression of vitrinite reflectance commonly reported in organic rich shales. The suppression would be higher for sample OMC5 if all measured values are taken into account because many of the lowest reflecting values corresponded to participants not reporting spectral data.

The spectral parameters of the kerogen concentrate and the whole rock measured on unstructured fluorescing organic matter (AOM) for the Green River sample (OMC5) showed significant scatter and no clear trend. On the contrary, spectral parameters of the kerogen concentrate measured on both telalginite and lamalginite in the Tremembé sample (OMC6) indicated a higher maturity for the kerogen concentrate. This result indicates that both components in this sample are sensitive to the isolation procedure. These results are interpreted to indicate that the preparation procedures affect fluorescence properties as observed by Mendonça Filho *et al.* (2009, 2010).

The equivalent vitrinite reflectance for sample OMC6A, using telalginite as the object of measurement, presents an excellent correlation with average measured vitrinite reflectance. However, in the equivalent vitrinite reflectance results for sample OMC6A, using lamalginite as the object of measurement, correlation with average measured vitrinite reflectance is poorer. For sample OMC6A, misfit between equivalent vitrinite reflectance and average measured vitrinite reflectance is high, and in sample OMC6B the misfit is very high. In this case, these results may suggest that those organic particles are inappropriate for this analysis, in addition to reflecting a more accentuated influence of the preparation procedures on the fluorescence properties of these macerals.

In summary, following the criteria and parameters described in the statistical evaluation system of ICCP (www.iccop.org), excellent results were obtained in this exercise and the selected samples allowed an accurate study on the effect of the isolation procedure on organic matter optical parameters in Type I kerogen.

8. References:

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Nathalie Bou Karam obtained a Master of Professional Engineering in Chemical Engineering from the University of Sydney, NSW, Australia, as well as Bachelor of Science, specializing in Chemistry from the University of Balamand, El Koura, Lebanon. She has been responsible for the laboratory testing of petroleum products for ExxonMobil in Lebanon. In 2010 Nathalie was employed at Energy Resources Consulting to undertake coal petrographic analyses as well installation and calibration of laboratory equipment. She currently works for SGS in Central Queensland (Mackay), continuing work with coal petrographic analyses. Her application is supported by Dr Peter Crosdale.

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ICCP Awards and Calls for Nominations

ICCP offers a number of awards to recognise outstanding achievements in coal and organic petrology at various stages of career development. Awards available and a brief summary are given below. Full details on the nature of the award, its terms and conditions and how to apply can be found on the ICCP home page at http://www.iccop.org or by contacting the chair of the award committee (see inside front cover). More information as to the criteria considered for each award can be found on page 9 of this issue (ICCP News 51)

Thiessen Medal

This is the highest award offered by ICCP. It recognises a lifetime of achievement and outstanding contributions in the fields of coal and organic petrology. The award consists of a bronze medal. The award committee consists of the five most recent medalists. Awards are made from time to time but applications are called for every 2 years.

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Answer to Know Your Coal Petrologist #51

MáriaHámor-Vidó and Kees Kommeren in Belgrade, 2010.

A Description of the Salt Mine in Wieliczka in 1736

Chevalier. The famous Geographer I mention'd to you, told us, * that in 1252 (for I took down the Date in my Pocket-Book) they diſcovered ſome Salt-Mines near *Cracow*, and which now make one of the moſt conſiderable Branches of the King of *Poland*'s Revenues. They are ſituated under the little Town of *Williſca*, which, except the Church, conſiſts entirely of Houſes or rather Caves dug under Ground. There are four Mouths or Openings, through which they go down into the Mines, of which the two principal ones are in the Town, and up through theſe they draw out the great Flakes of Salt which they lay before their Doors for Men and Horſes to trample upon and break with their Feet before they grind them ſmaller in the Mills. The two other Deſcents ſerve chiefly for the letting down through them the Wood and other Neceſſaries for the Labourers. The Holes are about four or five Foot Square, and lin'd to the very Bottom with ſtrong Planks. Over the Mouth of the Pit is a large Wheel that is turn'd by a Horſe, to which is faſten'd a great Cable as thick as a Man's Arm, which lets down or draws up what they have Occaſion for. Their Manner of going down, which they may do thirty or forty together, is thus; he that is to go firſt ties a ſtrong Cord about him faſt to the Cable, upon which ſeating himſelf he takes another Labourer upon his Lap; theſe are let down both together about three or four Foot to make room for another, who in like manner faſtens himſelf with

 a Cord

* *Philoſophical Tranſactions abridg'd by* J. Lowthorp, *T. 2. P. 524.*

WHAT'S HAPPENING

14 - 16 August 2013

COAL-GEN 2013, Charlotte, North Carolina, USA.
http://www.coal-gen.com/index.html

25 Aug - 4 Sept 2013

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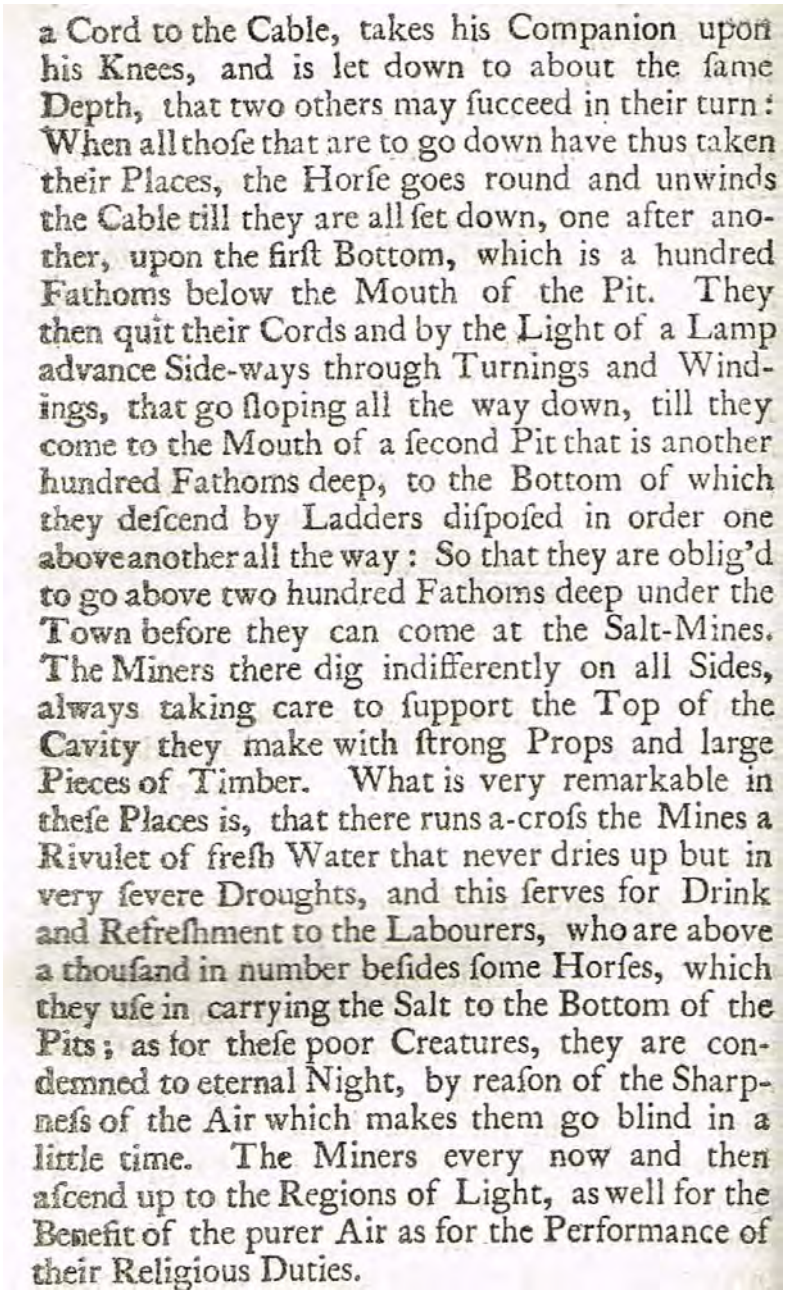
mailto:magdalena.misz@us.edu.pl
http://prac.us.edu.pl/~iccop-tsop-2013/

15 - 20 September 2013

26th IMOG - International Meeting on Organic Geochemistry, Tenerife, Canary Islands, Spain.
http://www.imog2013.org/

A Description of the Salt Mine in Wieliczka in 1736 (continued)



a Cord to the Cable, takes his Companion upon his Knees, and is let down to about the ſame Depth, that two others may ſucceed in their turn: When all thoſe that are to go down have thus taken their Places, the Horſe goes round and unwinds the Cable till they are all ſet down, one after another, upon the firſt Bottom, which is a hundred Fathoms below the Mouth of the Pit. They then quit their Cords and by the Light of a Lamp advance Side-ways through Turnings and Windings, that go ſloping all the way down, till they come to the Mouth of a ſecond Pit that is another hundred Fathoms deep, to the Bottom of which they deſcend by Ladders diſpoſed in order one above another all the way: So that they are oblig'd to go above two hundred Fathoms deep under the Town before they can come at the Salt-Mines. The Miners there dig indifferently on all Sides, always taking care to ſupport the Top of the Cavity they make with ſtrong Props and large Pieces of Timber. What is very remarkable in theſe Places is, that there runs a-croſs the Mines a Rivulet of freſh Water that never dries up but in very ſevere Droughts, and this ſerves for Drink and Refreſhment to the Labourers, who are above a thouſand in number beſides ſome Horſes, which they uſe in carrying the Salt to the Bottom of the Pits; as for theſe poor Creatures, they are condemned to eternal Night, by reaſon of the Sharpneſs of the Air which makes them go blind in a little time. The Miners every now and then aſcend up to the Regions of Light, as well for the Benefit of the purer Air as for the Performance of their Religious Duties.

from Pluche, N.A. (1736) Spectacle de la Nature: or Nature Display'd. Translated from the Original French. Vol. III. J. and J. Pemberton et. al., London. pp.99-100.

16 - 19 September 2013

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XVII International Coal Preparation Congress (ICPC), Istanbul, Turkey.
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International Conference for Coal Science and Technology (ICCS&T) 2013,Pennsylvania, USA.
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