

# EMPIR 17RPT02

## rhoLiq

### ESTABLISHING TRACEABILITY FOR LIQUID DENSITY MEASUREMENTS

### WORKSHOP

Remote (Ms Teams®)

Thursday, 28.04.2022 (UTC +1)

### Agenda

|   |   |  |
|---|---|--|
| 09:30 to 09:45  | Welcome, introduction<br>Brief presentation of IPQ  | J. Alves e Sousa<br>(IPQ, Portugal)  |
| 09:45 to 10:15  | rhoLiq, A EMPIR project   | A.Furtado<br>(IPQ, Portugal)   |
| 10:15 to 10:30  | Coffee break  |  |
| <b>Density measurement at primary-level: Hydrostatic weighing and density reference liquids</b> |   |  |
| 10:30 to 11:15  | -Theory, measurement, substitution method, uncertainty budget, tips & tricks<br>- New guide for hydrostatic weighing method (for submission to EURAMET) | J. Rauch<br>(PTB, Germany)<br>G. Sariyerli<br>(TUBITAK, Turkey)                  |
| 11:15 to 12:15  | - Effects of surface tension and viscosity and viscoelasticity on density results by the hydrostatic weighing method                                    | G. Sariyerli<br>(TUBITAK, Turkey)  |
| 12:15 to 13:30  | Lunch break   |  |
| <b>Density measurement at secondary-level: Oscillation-type density meters</b>                  |   |  |
| 13:30 to 14:15  | -Theory, measurement, uncertainty budget, tips & tricks<br>- New guide for oscillation-type density meters (for submission to EURAMET)                  | E. Lenard<br>(GUM, Poland – to be confirmed)<br>B. Laky<br>(Anton Paar, Austria) |
| 14:15 to 15:15  | - Effects of viscosity, viscoelasticity, temperature and pressure on density results produce by oscillation-type density meters                         | E. Lenard<br>(GUM, Poland – to be confirmed)<br>A.Furtado<br>(IPQ, Portugal)     |
| 15:15 to 15:30  | Coffee break  |  |
| 15:30 to 15:45  | - New guide for production and certification of reference materials for density (for submission to EURAMET)   | E. Malejczyk<br>(GUM, Poland)  |
| 15:45 to 16:00  | (New) Good practice guide for measurement of liquids in industry  | P. Neuvonen<br>(JV, Norway)  |
| 16:00 to 16:30  | Round table and closure   | A.Furtado<br>(IPQ, Portugal)   |

The EMPIR project “17RPT02-rhoLiq” is carried out with funding of European Union under the EMPIR. The EMPIR is jointly funded by the EMPIR participating countries within EURAMET and the European Union.