



**ATMO ACCESS**  
Access to Atmospheric Research Facilities



**Services provided by Isolab UU**  
Isotope laboratory at Utrecht University



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[atmo-access.eu](https://atmo-access.eu)

<b>SERVICE 1 – Methane stable isotope analysis (<math>\delta^{13}\text{C-CH}_4</math>, <math>\delta\text{D-CH}_4</math>)</b>	
TYPE OF SERVICE	Research, Technical service
SERVICE DESCRIPTION	<p>Measurement of air samples and calibration of cylinders for isotopic composition of <math>\text{CH}_4</math> (<math>\delta^{13}\text{C}</math> and <math>\delta\text{D}</math>) at Utrecht University.</p> <p>These measurements can be used for source attribution and isotope budgeting. Atmospheric samples should be provided in clean glass or metal flasks, suitable bags or cylinders in which <math>\text{CH}_4</math> is stable.</p> <p>Samples from other media (water, sediments, etc.) can be analyzed as well. Specification of the sample containers and expected concentrations is beneficial.</p>
ATMOSPHERE TYPE	Ambient, controlled
TYPE OF ACCESS	Remote
TARGET USERS	Academia, business sector and public sector
SERVICE STATUS	The service is available (operational and ready to be offered)
AVAILABILITY PERIOD	All year round
TIME CONSTRAINTS	None
CONTACT	Thomas Röckmann (t.roeckmann@uu.nl), Elena Popa (M.E.Popa@uu.nl)
<b>SERVICE 2 – Methane clumped isotope analysis (<math>\Delta^{13}\text{C-D-CH}_4</math>, <math>\Delta\text{-D-D-CH}_4</math>)</b>	
TYPE OF SERVICE	Research, Technical service
SERVICE DESCRIPTION	<p>Measurement of gas samples for clumped isotopic composition of <math>\text{CH}_4</math> (<math>\Delta^{13}\text{CDH}_3</math> and <math>\Delta\text{CD}_2\text{H}_2</math>) at Utrecht University.</p> <p>These measurements can be used for determining methane formation temperatures and non-thermodynamic equilibrium processes.</p> <p>Samples should be provided in suitable flasks. The concentration needed is typically &gt; 5%, and it may be possible to analyze samples with <math>\text{CH}_4</math> as low as 0.5 %, upon discussion. One analysis needs at least 5 ml STP of pure methane. The samples should always be discussed in advance.</p>
ATMOSPHERE TYPE	Ambient, controlled
TYPE OF ACCESS	Remote
TARGET USERS	Academia, business sector and public sector
SERVICE STATUS	The service is available (operational and ready to be offered)
AVAILABILITY PERIOD	All year round

TIME CONSTRAINTS	Possible long waiting times
CONTACT	Elena Popa (M.E.Popa@uu.nl), Thomas Röckmann (t.roeckmann@uu.nl)
<b>SERVICE 3 – Carbon monoxide stable isotope analysis (<math>\delta^{13}\text{C-CO}</math>, <math>\delta^{18}\text{O-CO}</math>)</b>	
TYPE OF SERVICE	Research, Technical service
SERVICE DESCRIPTION	Measurement of air samples for isotopic composition of CO ( $\delta^{13}\text{C}$ , $\delta^{18}\text{O}$ ) at Utrecht University. These measurements can be used for source attribution and isotope budgeting. Atmospheric samples should be provided in clean glass or metal flasks in which CO is stable.
ATMOSPHERE TYPE	Ambient, controlled
TYPE OF ACCESS	Remote
TARGET USERS	Academia, business sector and public sector
SERVICE STATUS	The service is available (operational and ready to be offered)
AVAILABILITY PERIOD	All year round
TIME CONSTRAINTS	None
CONTACT	Elena Popa (M.E.Popa@uu.nl), Thomas Röckmann (t.roeckmann@uu.nl)
<b>SERVICE 4 – Hydrogen stable isotope analysis (<math>\delta\text{D-H}_2</math>)</b>	
TYPE OF SERVICE	Research, Technical service
SERVICE DESCRIPTION	Measurement of air samples for isotopic composition of H <sub>2</sub> ( $\delta\text{D}$ ) at Utrecht University. These measurements can be used for source attribution and isotope budgeting. Atmospheric samples should be provided in clean glass or metal flasks in which H <sub>2</sub> is stable.
ATMOSPHERE TYPE	Ambient, controlled
TYPE OF ACCESS	Remote
TARGET USERS	Academia, business sector and public sector
SERVICE STATUS	The service is available (operational and ready to be offered)
AVAILABILITY PERIOD	All year round
TIME CONSTRAINTS	None
CONTACT	Elena Popa (M.E.Popa@uu.nl), Thomas Röckmann (t.roeckmann@uu.nl)



