



Analysis

- Refrigerant analysis
- Oil analysis
- Heat transfer fluid analysis



Climalife

Recommendations



Recommendations

Refrigerants

Has the refrigerant fluid in the installation become contaminated?	Identification/purity Composition
Is there any moisture in the fluid?	Water content
Is there any residue in the oil or fluid?	Residue or oil content
Is there any acidity in the fluid?	Acid index

Lubricants

What is the general condition of the oil in the installation?	DPH A
	DPH B
After a retrofit, does any of the original oil remain as residue?	DPH E + DPH R
What are the general characteristics of the oil in the installation?	Specific analysis kit

Secondary refrigerant/heat transfer fluids

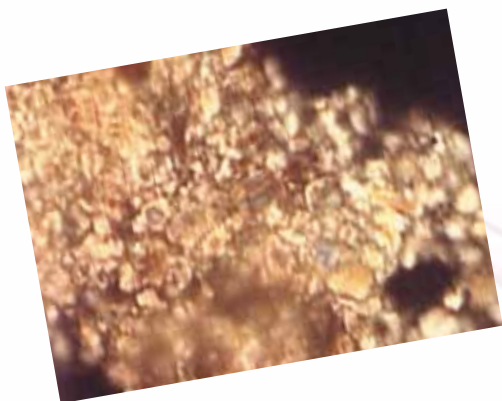
What is the freezing point of the fluid?	APC A
What are the principal characteristics of the fluid?	APC B
What kind of glycol is it, and what are its principal characteristics?	APC B + CPG quantiglycol
Which filters should I use?	Particle count
How much wear has the installation suffered, and are there any particles in the fluid?	Ferrography

Frequency	Benefit
As needed	Safety
As needed	Insurance purposes
As needed	Preventative
As needed	Preventative
As needed	Preventative
Once a year	To ensure that any changes in the installation are noted
Once a year	To ensure proper insulation
As needed (after a retrofit)	Safety
As needed	For confirmation purposes
As needed	Safety - essential in winter
At least once a year	Insurance purposes
As needed	When an installation is about to be put back into use
As needed	Saves money
As needed	Preventative



Analysis

Solutions for the preventive follow-up of installations



767



3835

Refrigerant analysis

Ref.	Products	Comments
5888	Liquid analysis package	Includes: identification, water content, oil content, acidity, appearance. For low pressure refrigerants: R-11, R-113, R-123, R-141b.
5889	Liquefied gas analysis package	Includes: identification, water content, oil content, acidity, appearance. For CFCs, HCFCs, HFCs except low pressure refrigerants (see 5888).
5890	Liquefied gas analysis package with composition	Includes: composition, water content, oil content, acidity, appearance. For CFCs, HCFCs, HFCs except low pressure refrigerants.
778	Identification/purity (GPC)*	Determines the purity of the fluid, using chromatography, during the gaseous phase.
779	Composition (GPC)*	Determines the composition by weight of the liquid phase of the refrigerant.
772	Water content of liquefied gas	Measures the water content of the liquid phase of the refrigerant.
775	Oil residue or content	Measures the residue content of the liquid phase of a refrigerant.
770	Acid rate for liquefied gas	Measures the acidity of the liquid phase of the refrigerant.
776	Non-condensable gases by GPC (during the gaseous phase)*	Measures non-condensable gases during the gaseous phase of the refrigerant fluid.
777	Water/oil content of ammonia	Measures the water and oil content of NH ₃ .
769	On-site sampling	We will come and take samples at your location.
767 884 3835 768	Low pressure sampling cylinder High pressure sampling cylinder Medium pressure sampling cylinder Ammonia sampling cylinder] Provision of.

* GPC: Gas Phase Chromatography



Oil analysis

Ref.	Products	Comments
7562	Acitest Unipro	Box of 6. Acidity test for all kind of additivated or non additivated oils (formulation without toluene).
DPH: Periodic diagnostic test on the refrigerant oil in a circuit. The values obtained are compared with both standard values and Climalife recommendations.		
875	DPH A	Appearance + viscosity + acid index + water content + elements indicating wear + additives + contaminants. 1 x 60 ml bottle.
876	DPH B	Same as DPH A + dielectric constant. 1 x 500 ml bottle.
877	DPH E	Used to determine the percentage of oil remaining after a retrofit. Physico-chemical state is compared with a control sample. 3 x 60 ml bottles (1 for the oil contained in the installation before retrofit, 1 for the new oil before introduction in the system and 1 for the oil in the installation after retrofit and running).
3978	DPH R	After a DPH E only, determines the percentage of the original oil remaining after the subsequent operations to change the oil. 1 x 60 ml bottle.
6035	Kit for specific analysis	4 tests to analyse viscosity, water content, acidity and the presence of the 5 elements which indicate wear (Fe, Zn, Cu, Al, Si).
789	Viscosity at 40°C	Measures kinematic viscosity.
785	Acidity rate	Measures the acidity of the lubricant.
787	Element contents	Identifies and quantifies the following elements: B-P-Zn-Fe-Cr-Si-Ba-Mg-Cu-Mo-Sn-Pb-Cd-Al-Ni-Ca-Sb-Ag-Na.
786	Water content	Measures the water content of the lubricant.
788	Dielectric constant	Measures the electrical isolation qualities of the lubricant.
4962	Ferrogaphy oil	Identifies and quantifies the particles present in the lubricant.
6083	Particle counting	Determines the number of particles by size. Allows the correct size filter to be selected.
6084	Infrared spectrum	Identifies the nature of an unmixed lubricant.
6548	Kit gravimetric pollution	Measures the particle mass of the lubricant.

Acitest Unipro

On site acidity control test for an instantaneous result.

Allows diagnosis during maintenance, increases the installations security and productivity and reduces the prospect of failure. Researched and developed by Climalife to determine the acidity level of an oil. Gives an indication of its state: good, limit, or acid.



7562

DPH

Periodic diagnostic test for preventive maintenance of installations.

Oil values are compared with standards and recommendations are made by Climalife experts. Climalife will advise you about the sample data based on the chosen frequency.



6035



875

Analysis

Solutions for the preventive follow-up of installations



Heat transfer fluid analysis

Ref.	Products	Comments
5896	Alkaline reserve	Evaluates protection against corrosion.
5897	pH	Measures the potential of hydrogen (pH). i.e Alkalinity/Acidity.
5898	Freezing point	Checks the antifreeze protection of the heat transfer fluid.
5899	Index of refraction at 20°C	Controls the freezing point using refractometry.
6021	Particle counting	Determines the number of particles by size. Allows the correct size filter to be selected.
6022 6023 6024	Viscosity $\leq 20^{\circ}\text{C}$ Viscosity $> 20^{\circ}\text{C}$ et $\leq 50^{\circ}\text{C}$ Viscosity $> 50^{\circ}\text{C}$ et $\leq 100^{\circ}\text{C}$	Determines charge loss and allows the correct size pump to be selected.
6681	Elements content in aqueous environment	Identifies and quantifies the following elements: B-P-Zn-Fe-Cr-Si-Ba-Mg-Cu-Mo-Sn-Pb-Cd-Al-Ni-Ca-Sb-Ag-Na.
6682	Ferrography heat transfer fluids	Identifies and quantifies the particles present in the heat transfer fluid.
6895	Alcali analysis	Density/Composition/Freezing point.



Heat transfer fluid analysis (continued)

Ref.	Products	Comments
<p>• HTF analysis kits APC kit: Periodic analysis of the heat transfer fluid and interpretation of the results by the Climalife laboratory.</p>		
878	APC A	Appearance + freezing point.
879	APC B	APC A + density at 20°C + reserve alkalinity (deterioration evaluation) + pH.
5381	APC D	APC B + GPC* quantiglycol test.
4960	Analyse CPG* quantiglycol	Quantitative information about the presence of MEG (Monoethylene glycol) or MPG (Monopropylene glycol) in a mixture.

* GPC: Gas Phase Chromatography.



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Kit APC

Periodic control analysis for preventive maintenance of climatic circuits.

The APC kit is composed of a flask for sampling on-site and a sampling letter to send it to Climalife laboratory.

