



Refrigerant Analysis



Non-contractual photo

INTRODUCTION

Climalife Analysis Service of the global range of refrigerants allows you to verify the physical-chemical properties of refrigerants and determine whether the fluid sample taken and analysed meets the specifications of the original fluid.

In addition, the large number of different refrigerants on the market creates a significant risk of non-compliant refrigerant mixtures in installations.

This brings a risk to installations and creates difficulties during controls and settings.

PERFORMANCES

Analysing the properties of the refrigerant enables the diagnosis of a malfunction and helps to determine the quality.

This status report secures your current and future contracts and avoids costly damage.

ANALYSIS RANGE

Ref.	Analysis	Applicable for
778	Identification / purity - CPG (Gas Phase Chromatography) Identifies the refrigerant, indicates purity and reports on impurities in the sample, <u>without quantifying</u> . Detecting undesirable molecules and verification of compliance with the physical-chemical properties of the refrigerant.	CFC – HCFC – HFC – HFO Pure fluid ¹
779	Composition - CPG (Gas Phase Chromatography) Identifies and determines the composition of the fluid, and quantifies the impurities present in the sample (percentage). Detect and quantify the presence of undesirable molecules to ensure that the mixture is in compliance with the concentrations and physical-chemical properties of the original fluid.	CFC – HCFC – HFC – HFO Blends ²



772	Water content of liquefied gas (Karl Fischer method) Measures the water content of the liquid phase of the refrigerant (ppm). Checks the value is in accordance with the original specifications, and compatible with the proper function of the installation, confirming the source of the identified or suspected malfunction of an installation.	CFC – HCFC – HFC – HFO
775	Oil residue or content Measures the oil content of the liquid phase of a refrigerant (ppm and/or %weight).	CFC – HCFC – HFC – HFO
770	Acid rate for liquefied gas Measures the acidity of the liquid phase of the refrigerant (mgKOH/g of the product). Checks the value is in accordance with the original specifications and compatible with the proper function of the installation. Confirming the cause of malfunction found or suspected on the installations. Identifying the contamination,	CFC – HCFC – HFC – HFO
776	Non-condensable gases by CPG (Gas Phase Chromatography) Measures non-condensable gases in the GASEOUS PHASE (mandatory) of the refrigerant fluid (% vol). Verification of the grade compliance with the original specification and proper function of the installation or safety features.	CFC – HCFC – HFC – HFO Caution: Sampling only on the gaseous phase. There must be no liquid in the bottle.
777	Water/oil content of ammonia Measures the water and oil content of ammonia (ppm and/or % volume). Verifies compliance with the original specifications.	Specific NH ₃
5888	Liquid analysis package (based on 778 analysis) Includes identification/purity, water content, oil content, acidity, appearance.	CFC – HCFC – HFC – HFO Low pressure refrigerants only ³
5889	Liquefied gas analysis package (based on 778 analysis) Includes identification, water content, oil content, acidity, appearance.	CFC – HCFC – HFC – HFO except Low Pressure refrigerants
5890	Liquefied gas analysis package with composition (based on 779 analysis) Includes composition, water content, oil content, acidity, appearance.	CFC – HCFC – HFC – HFO Except low pressure refrigerants



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Sampling bottles must be selected and adapted to the refrigerants fluids to be analysed

Type	Refrigerant					Sample Bottle
Pure fluids ¹	R-11	R-123	R-142b	R-227ea		Medium Pressure
	R-12	R-124	R-143a	R-236fa		
R-113	R-125	R-152a	R-245fa			
R-114	R-134a	R-22	R-1233zd			
R-115	R-141b	R-32	R-1234ze			
	R-13	R-23				High Pressure
Blends ²	R-401A	R-409B	R-438A	Isceon MO 89		Medium Pressure
	R-401B	R-410A	R-442A	FX80		
	R-402A	R-413A	R-444B	R-454A		
	R-402B	R-417A	R-447A	R-454B		
	R-403B	R-422A	R-448A	R-455A		
	R-404A	R-422D	R-449A	R-500		
	R-407C	R-423A	R-449B	R-502		
	R-407F	R-427A	R-450A	R-507A		
	R-408A	R-434A	R-452A	R-513A		
	R-409A	R-437A	R-453A			
	R-503				High Pressure	
Low Pressure fluids ³	R-11	R-113	R-123	R-141b	R-1233zd	Medium Pressure
Others	R-717	R-744				SPECIFIC

Non-exhaustive list: consult us if the fluid does not appear in this list
Composition Analysis is a "non-standard" mixture available on request

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