Medicinal air

Medicinal air			
Monograph		**Ph Eur**	**USP**
Name		Air, Medicinal	Medical air
Reference		1238	Not specified
Chemical formula		N/A	N/A
Definition		Compressed ambient air containing not less than 20.4 %V/V and not more than 21.4 % V/V of oxygen.	Natural or synthetic mixture consisting largely of nitrogen and oxygen, containing not less than 19.5% and not more than 23.5% V/V of oxygen.
Identification		Complies with the assay ***or*** glowing wood splinter not extinguished ***or*** oxygen content tested by passing sample through potassium hydroxide/sodium dithionite solution.	Meets the assay acceptance criteria
Production			
Assay	Assay	20.4%V/V ≤ oxygen ≤ 21.4 % V/V	19.5% V/V ≤ oxygen ≤ 23.5% V/V
	Analytical method	Paramagnetic analyser	Paramagnetic analyser
Impurities			
CO	Limit	≤ 5 ppm V/V	≤ 0.001% V/V*
	Analytical method	Infrared analyser	Detector tube
CO_2	Limit	≤ 500 ppm V/V	≤ 0.05% V/V*
	Analytical method	Infrared analyser	Detector tube
SO_2	Limit	≤ 1 ppm V/V	≤ 5 ppm V/V*
	Analytical method	UV fluorescence analyser	Detector tube
NO/ NO_2	Limit	≤ 2 ppm V/V in total	≤ 2.5 ppm V/V*
	Analytical method	Chemiluminescence analyser	Detector tube
Oil	Limit	≤ 0.1 mg/m^3	No condensate on mirror
	Analytical method	Detector tube when an oil lubricated compressor is used for production	Pass gas slowly over stainless steel mirror*
H_2O	Limit	≤ 67 ppm V/V	No condensate on mirror
	Analytical method	Electrolytic hygrometer	Pass gas slowly over stainless steel mirror*
Odour	Limit	Not specified	Not required
	Analytical method		
Tests			
CO	Limit	≤ 5 ppm V/V	No specific tests section
	Analytical method	Detector tube	
CO_2	Limit	≤ 500 ppm V/V	
	Analytical method	Detector tube	
SO_2	Limit	≤ 1 ppm V/V	
	Analytical Method	Detector Tube	
NO/ NO_2	Limit	≤ 2 ppm V/V	
	Analytical Method	Detector Tube	
Oil	Limit	≤ 0.1 mg/m^3	
	Analytical Method	Detector Tube	
H_2O	Limit	≤ 67 ppm V/V	
	Analytical Method	Detector Tube	

Synthetic medicinal air

Synthetic medicinal air			
Monograph		**Ph Eur**	**USP**
Name		Air, Synthetic Medicinal	No equivalent US Pharmacopoeia monograph specified, but covered by medical air
Reference		1684	
Chemical formula		N/A	
Definition		Gas mixture of nitrogen (Ph.Eur) and oxygen (Ph.Eur) containing between 95.0 % to 105.0 % of the nominal value which is between 21.0 % V/V to 22.5 % V/V of oxygen.	
Identification		Complies with the assay ***or*** glowing wood splinter not extinguished ***or*** oxygen content tested by passing sample through potassium hydroxide/sodium dithionite solution.	
Production			
Assay	Assay	Containing between 95.0% to 105.0% of the nominal value which is between 21.0 % V/V to 22.5 % V/V of oxygen.	
	Analytical method	Paramagnetic analyser	
Impurities			
H_2O	Limit	≤ 67 ppm V/V oxygen	
	Analytical method	Electrolytic hygrometer	
Tests			
H_2O	Limit	≤ 67 ppm V/V oxygen	
	Analytical method	Detector tube	