

6 - TEST / ACCEPTANCE SPECIFICATION

Customer:	Chongqiang University C/O: LabTech		
Quotation Number:	15187	Date:	09/12/2021
Job Number:	IN1274	Date:	11/01/2022

HS20-22

Reference Gas Precision (n=5)

¹³ C	(CO ₂)	0.06	0.06 0.06	✓
¹⁵ N		0.06	0.06	
¹⁸ O	(CO ₂)	0.06		
³⁴ S	(SO ₂)	0.1		
² H		0.4		

Reference Gas Linearity

¹³ C	≤0.02‰/nA	0.20 STD Dev.	✓
¹⁵ N	≤0.02‰/nA	0.24	✓

IsoEarth & IsoEarth+

Combustion (n=5)

¹³ C	100 µg C	0.1	10 µg C	0.8
¹⁵ N	100 µg N	0.15	10 µg N	1.5
³⁴ S	25 µg S	0.3	10 µg S	1.0
Dual	400 µg C	0.1	100 µg N	0.15

Integra2

¹³ C	100 µg C	0.2
¹⁵ N	100 µg N	0.3
Dual	100 µg N & 400 µg C	0.4 & 0.15
³⁴ S	30 µg S	0.5
¹⁸ O	100 µg O	0.5

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HT-EA			
Pyrolysis (n=5)			
¹⁸ O	100 µg O or 1 µl water	0.3	
² H	200 µg H or 1 µl water	1.0	

Aqua, µCarbs & GasBox					
Equilibrations (n=5)					
¹⁸ O	0.2 ml water	0.1			
² H	0.2 ml water	2.0			
Carbonates (n=5)					
¹³ C	100 µg CaCO ₃	0.08			
¹⁸ O	100 µg CaCO ₃	0.1			
Gas Analysis (n=5)					
¹³ C	5% CO ₂	0.1		Air CO ₂	0.1
¹⁸ O	5% CO ₂	0.1		Air CO ₂	0.2
² H	0.5 ml H ₂	1.5			
¹⁵ N	0.5 ml N ₂	0.1		100 ppm N ₂ O	0.5
¹³ C	Breath (12 ml)	0.1			
DIC (n=5)					
¹³ C	15ppm (0.5ml)	0.15			

LC-I			
(n=5)			
¹³ C		0.2	

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GC Orchid					
Combustion (n=3 for each analyte)					
¹³ C	3 Alkanes	100 ng C	0.2	10 ng C	0.5
¹⁵ N	2 Amines	100 ng N	0.5	14 ng N	1.5
Pyrolysis (n=3 for each analyte)					
² H	3 Alkanes	250 ng H	3.0	25 ng H	10.0
¹⁸ O	3 FAMES	100 ng O	0.5	20 ng O	2.0
Water pyrolysis (n=5)					
² H	0.1 µl water	3.0			
¹⁸ O	0.1 µl water	0.4			

CryoRange					
(n=5)					
¹³ C	Air CO ₂ (12ml)	0.1	Air CH ₄ (125ml)	0.2	
¹⁵ N	Air N ₂ (1ml)	0.1	Air N ₂ O (125ml)	0.4	
¹⁸ O	Air CO ₂ (12ml)	0.15	Air N ₂ O (125ml)	0.7	
¹⁸ O	Air O ₂ (1ml)	0.1			
² H	Air CH ₄	3.0			
¹³ C	TOC (5ppm)	0.4			
¹³ C	Laser				

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Geo2		
Internal precision (no change overs)		
² H	200 Bar µl	0.15
¹³ C	100 Bar µl	0.01
¹⁵ N	100 Bar µl	0.01
¹⁸ O	100 Bar µl	0.015
³⁴ S	100 Bar µl	0.015
Single cold finger volumes (10 change overs)		
¹³ C	20 Bar µl	0.01
¹⁸ O	20 Bar µl	0.015
¹³ C	3 Bar µl	0.02
¹⁸ O	3 Bar µl	0.03
CAPS (n=5)		
¹³ C	50 µg CaCO ₃	0.03
¹⁸ O	50 µg CaCO ₃	0.06
WES (n=5)		
² H		1.0
¹⁸ O		0.05
Manifold (10 tubes)		
² H		0.5
¹³ C		0.02
¹⁵ N		0.02
¹⁸ O		0.03
³⁴ S		0.03



Test acceptance - 6

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Special tests	

Sales Signature: <i>[Signature]</i>	Date: <i>22/6/22</i>
Test Signature: <i>[Signature]</i>	Date: <i>22/6/22</i>