

### **OIL ANALYSIS REPORT**

Machine Id

# KAESER AIRCENTER 7.5 5949381 (S/N 1543)

Compressor

Fluid KAESER SIGMA (OEM) S-460 (--- GAL)

#### DIAGNOSIS

#### Recommendation

Oil and filter change at the time of sampling has been noted. We recommend an early resample in 500 hours to monitor this condition.

#### Wear

All component wear rates are normal.

#### Contamination

There is a light concentration of water present in the oil. The amount and size of particulates present in the system are acceptable.

#### Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION         method         limit/base         current         history1         history1 <th></th> <th></th> <th>0ct2019</th> <th>Jul2020 Mar2021</th> <th>Dec2021 Jun2022 Mar2023</th> <th>M=2024</th> <th></th>			0ct2019	Jul2020 Mar2021	Dec2021 Jun2022 Mar2023	M=2024	
Sample Number         Client Info         KCPA016199         KCP5816         KCP4100           Sample Date         Client Info         21 Mar 2024         06 Mar 2023         30 Jun 20           Machine Age         hrs         Client Info         272         300         330           Oil Age         hrs         Client Info         272         300         330           Oil Changed         Client Info         272         300         330           Sample Status         method         limit/base         current         history1         history1           VEAR METALS         method         limit/base         current         history1         history1           Nickel         ppm         ASTM 05155m         >10         0         0         0           Nickel         ppm         ASTM 05155m         >10         0         0         0           Aluminum         ppm         ASTM 05155m         >10         0         0         0         0           Aluminum         ppm         ASTM 05155m         >10         0         0         0         0         0           Aluminum         ppm         ASTM 05155m         >10         0         0         0			002010	GREATA HARACE	DOLLET OUNCOLL INSISTE	HALSE I	
Sample Date         Client Info         21 Mar 2024         06 Mar 2023         80 Jun 20           Machine Age         hrs         Client Info         3030         2758         2464           Oil Age         hrs         Client Info         272         300         330           Oil Changed         Client Info         Changed         ABNORMAL         ABNORMAL         ABNORMAL           Sample Status         Imit/base         current         history1         history1         history1           Kron         ppm         ASTM D5185m         >50         0         0         0           Nickel         ppm         ASTM D5185m         >3         0         0         0           Silver         ppm         ASTM D5185m         >10         0         0         0           Agenda         ppm         ASTM D5185m         >10         0         0         0           Capper         ppm         ASTM D5185m         >10         <1	SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Machine Age         hrs         Client Info         3030         2758         2464           Oil Age         hrs         Client Info         272         300         330           Sample Status         Client Info         Changed         Not Changd         N/A           Sample Status         method         Imit/base         current         history1         history1           WEAR METALS         method         Imit/base         current         history1         history1           Itanium         ppm         ASTM D5185m         >50         0         0         0           Nickel         ppm         ASTM D5185m         >30         0         0         0           Silver         ppm         ASTM D5185m         >2         0         0         0           Copper         ppm         ASTM D5185m         >10         0         <1	Sample Number		Client Info		KCPA016199	KCP55816	KCP41000
Oil Age         hrs         Client Info         272         300         330           Oil Changed         Client Info         Changed         Nci Changd         N/A           Sample Status         Imethod         limit/base         current         history1         ABNORMAL           WEAR METALS         method         limit/base         current         history1         history1           Kromium         ppm         ASTM D5185m         >50         0         0         0           Nickel         ppm         ASTM D5185m         >3         0         0         0           Silver         ppm         ASTM D5185m         >10         0         -1         -1           Cadad         ppm         ASTM D5185m         >10         0         -1         -1           Cadad         ppm         ASTM D5185m         >10         0         -1         -1           Cadadium         ppm         ASTM D5185m         10         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         -1           Astm D5185m         0         0         0         -1         -1         -1         -1	Sample Date		Client Info		21 Mar 2024	06 Mar 2023	30 Jun 2022
Oil Changed         Client Info         Changed         Not Changd         N/A           Sample Status         Image         Current         ABNORMAL         ABNORMAL <t< td=""><td>Machine Age</td><td>hrs</td><td>Client Info</td><td></td><td>3030</td><td>2758</td><td>2464</td></t<>	Machine Age	hrs	Client Info		3030	2758	2464
Sample Status         Image         ABNORMAL         ABNORMAL         ABNORMAL         ABNORMAL         ABNORMAL           WEAR METALS         method         limit/base         current         history1         history1           Iron         ppm         ASTM D5185m         >50         0         0         0           Nickel         ppm         ASTM D5185m         >3         0         0         0           Titanium         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >10         0         <1	Oil Age	hrs	Client Info		272	300	330
WEAR METALS         method         limit/base         current         history1         history1           Iron         ppm         ASTM D5185m         >50         0         0         0           Nickel         ppm         ASTM D5185m         >3         0         0         0           Nickel         ppm         ASTM D5185m         >3         0         0         0           Silver         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >10         0         <1	Oil Changed		Client Info		Changed	Not Changd	N/A
ron         ppm         ASTM D5185m         >50         0         0         <11           Chromium         ppm         ASTM D5185m         >10         0         0         0           Nickel         ppm         ASTM D5185m         >3         0         0         0           Silver         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >10         0         <1	Sample Status				ABNORMAL	ABNORMAL	ABNORMA
Dromium         ppm         ASTM D5185m         >10         0         0         0           Nickel         ppm         ASTM D5185m         >3         0         0         0           Silver         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >10         0         <1	WEAR METALS	;	method	limit/base	current	history1	history2
Nickel         ppm         ASTM D5185m         >3         0         0         0           Titanium         ppm         ASTM D5185m         >2         0         0         0           Silver         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >10         0         <1	Iron	ppm	ASTM D5185m	>50	0	0	<1
Titanium         ppm         ASTM D5185m         >3         0         0         0           Silver         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >10         0         <1	Chromium	ppm	ASTM D5185m	>10	0	0	0
Silver         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >10         0         <1	Nickel	ppm	ASTM D5185m	>3	0	0	0
Aluminum         ppm         ASTM D5185m         >10         0         <1         <1           Lead         ppm         ASTM D5185m         >10         0         0         0           Copper         ppm         ASTM D5185m         >50         <1	Titanium	ppm	ASTM D5185m	>3	0	0	0
Lead         ppm         ASTM D5185m         >10         0         0         0           Copper         ppm         ASTM D5185m         >50         <1	Silver	ppm	ASTM D5185m	>2	0	0	0
Lead         ppm         ASTM D5185m         >10         0         0         0           Copper         ppm         ASTM D5185m         >50         <1	Aluminum	ppm	ASTM D5185m	>10	0	<1	<1
Copper         ppm         ASTM D5185m         >50         <1         2         <1           Tin         ppm         ASTM D5185m         >10         <1	Lead		ASTM D5185m	>10	0	0	0
Tin       ppm       ASTM D5185m       >10       <1       0       <1         Antimony       ppm       ASTM D5185m       0       0       0       0         Vanadium       ppm       ASTM D5185m       0       0       0       0         ADDITIVES       method       limit/base       current       history1       history1       history1         Boron       ppm       ASTM D5185m       0       0       0       0       0         Barium       ppm       ASTM D5185m       90       0       0       0       4         Molybdenum       ppm       ASTM D5185m       0       0       0       4         Manganese       ppm       ASTM D5185m       0       23       38       51         Calcium       ppm       ASTM D5185m       2       0       0       2         Phosphorus       ppm       ASTM D5185m       2       0       1       12         Sulfur       ppm       ASTM D5185m       2       0       1       1         Sulfur       ppm       ASTM D5185m       2       0       1       1         Sulfur       ppm       ASTM D5185m <th< td=""><td>Copper</td><td></td><td>ASTM D5185m</td><td>&gt;50</td><td>&lt;1</td><td>2</td><td>&lt;1</td></th<>	Copper		ASTM D5185m	>50	<1	2	<1
Antimony         ppm         ASTM D5185m							
Vanadium         ppm         ASTM D5185m         0         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         limit/base         current         history1         history1           Boron         ppm         ASTM D5185m         90         0         0         0         4           Molybdenum         ppm         ASTM D5185m         90         0         0         0         4           Maganese         ppm         ASTM D5185m         90         23         38         51           Calcium         ppm         ASTM D5185m         90         23         38         51           Calcium         ppm         ASTM D5185m         90         23         38         51           Calcium         ppm         ASTM D5185m         2         0         0         21         21           Sulfur         ppm         ASTM D5185m         28         32         21         21           Sulfur         ppm         ASTM D5185m         21227         21493         21216           CONTAMINANTS         method         limit/base	Antimony		ASTM D5185m				
Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history1           Boron         ppm         ASTM D5185m         0         0         0         0           Barium         ppm         ASTM D5185m         90         0         0         0         4           Molybdenum         ppm         ASTM D5185m         90         23         38         51           Calcium         ppm         ASTM D5185m         90         23         38         51           Calcium         ppm         ASTM D5185m         90         23         38         51           Calcium         ppm         ASTM D5185m         90         21         21         21           Zinc         ppm         ASTM D5185m         28         32         21           Sulfur         ppm         ASTM D5185m         21227         21493         21216           CONTAMINANTS         method         limit/base         current         history1         history1           Solicon         ppm         ASTM D5185m         >20         0         <1         2 <td>-</td> <td></td> <td></td> <td></td> <td>0</td> <td>0</td> <td>0</td>	-				0	0	0
ADDITIVES         method         limit/base         current         history1         history1           Boron         ppm         ASTM D5185m         0         0         0         0           Barium         ppm         ASTM D5185m         90         0         0         4           Molybdenum         ppm         ASTM D5185m         90         23         38         51           Calcium         ppm         ASTM D5185m         90         23         38         51           Calcium         ppm         ASTM D5185m         90         21         2         1         12           Calcium         ppm         ASTM D5185m         0         <1					-		
Boron         ppm         ASTM D5185m         0         0         0         0           Barium         ppm         ASTM D5185m         90         0         0         4           Molybdenum         ppm         ASTM D5185m         0         0         <1		lele		limit/base	current	-	-
Barium         ppm         ASTM D5185m         90         0         0         4           Molybdenum         ppm         ASTM D5185m         0         0         <1		0000		in the base			
Molybdenum         ppm         ASTM D5165m         0         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1 <td></td> <td></td> <td></td> <td>00</td> <td></td> <td></td> <td></td>				00			
Manganese         ppm         ASTM D5185m         <1         <1         <1         <1           Magnesium         ppm         ASTM D5185m         90         23         38         51           Calcium         ppm         ASTM D5185m         2         0         0         2           Phosphorus         ppm         ASTM D5185m         0         <1				90	-		
Magnesium         ppm         ASTM D5185m         90         23         38         51           Calcium         ppm         ASTM D5185m         2         0         0         2           Phosphorus         ppm         ASTM D5185m         0         <1	,				-		
Calcium         ppm         ASTM D5185m         2         0         0         2           Phosphorus         ppm         ASTM D5185m         0         <1	-			00			
Phosphorus         ppm         ASTM D5185m         0         <1         12           Zinc         ppm         ASTM D5185m         28         32         21           Sulfur         ppm         ASTM D5185m         21227         21493         21216           CONTAMINANTS         method         limit/base         current         history1         history1           Silicon         ppm         ASTM D5185m         >25         0         1         <1           Sodium         ppm         ASTM D5185m         >25         0         1         <1           Sodium         ppm         ASTM D5185m         >20         0         <1         21           Sodium         ppm         ASTM D5185m         >20         0         <1         2           Water         %         ASTM D6304         >0.05         0.331         0.172         0.007           ppm         ASTM D6304         >500         3310         1720         73.3           FLUID CLEANLINESS         method         limit/base         current         history1         history1           Particles >6µm         ASTM D7647         >1300         166         915         3798 <th< td=""><td>•</td><td></td><td></td><td></td><td>-</td><td></td><td></td></th<>	•				-		
Zinc         ppm         ASTM D5185m         28         32         21           Sulfur         ppm         ASTM D5185m         21227         21493         21216           CONTAMINANTS         method         limit/base         current         history1         history1           Silicon         ppm         ASTM D5185m         >25         0         1         <1				2	-		
Sulfur         ppm         ASTM D5185m         21227         21493         21216           CONTAMINANTS         method         limit/base         current         history1         history1           Silicon         ppm         ASTM D5185m         >25         0         1         <1					-		
CONTAMINANTS         method         limit/base         current         history1         history1           Silicon         ppm         ASTM D5185m         >25         0         1         <1	-						
Silicon         ppm         ASTM D5185m         >25         0         1         <1           Sodium         ppm         ASTM D5185m         9         10         18           Potassium         ppm         ASTM D5185m         >20         0         <1					21227		-
Sodium         ppm         ASTM D5185m         9         10         18           Potassium         ppm         ASTM D5185m         >20         0         <1		S			current		history2
Potassium         ppm         ASTM D5185m         >20         0         <1         2           Water         %         ASTM D6304         >0.05 <b>0.331</b> 0.172         0.007           ppm Water         ppm         ASTM D6304         >500 <b>3310</b> 1720         73.3           FLUID CLEANLINESS         method         limit/base         current         history1         history1           Particles >4µm         ASTM D7647 <b>694</b> 1679         9392           Particles >6µm         ASTM D7647 <b>694</b> 1679         9392           Particles >6µm         ASTM D7647         >1300         166         915         3798           Particles >14µm         ASTM D7647         >20 <b>5</b> 52         6           Particles >21µm         ASTM D7647         >20 <b>5</b> 52         6           Particles >38µm         ASTM D7647         >3 <b>0</b> 1         0           Oil Cleanliness         ISO 4406 (c)         >/17/13 <b>17/15/11</b> 18/17/14         20/19/2           FLUID DEGRADATION         method         limit/base         current         history1         history1		ppm		>25	0		
Water         %         ASTM D6304         >0.05         0.331         0.172         0.007           ppm Water         ppm         ASTM D6304         >500         3310         1720         73.3           FLUID CLEANLINESS         method         limit/base         current         history1         history1           Particles >4µm         ASTM D7647         694         1679         9392           Particles >6µm         ASTM D7647         590         166         915         3798           Particles >14µm         ASTM D7647         >80         19         156         91           Particles >21µm         ASTM D7647         >20         5         52         6           Particles >38µm         ASTM D7647         >4         0         8         0           Particles >71µm         ASTM D7647         >3         0         1         0           Oil Cleanliness         ISO 4406 (c)         >/17/13         17/15/11         18/17/14         20/19/2           FLUID DEGRADATION         method         limit/base         current         history1         history1	Sodium	ppm			9	10	18
ppm         ASTM D6304         >500         3310         1720         73.3           FLUID CLEANLINESS         method         limit/base         current         history1         history1           Particles >4µm         ASTM D7647         694         1679         9392           Particles >6µm         ASTM D7647         >1300         166         915         3798           Particles >6µm         ASTM D7647         >80         19         156         91           Particles >14µm         ASTM D7647         >20         5         52         6           Particles >21µm         ASTM D7647         >4         0         8         0           Particles >38µm         ASTM D7647         >3         0         1         0           Oil Cleanliness         ISO 4406 (c)         >/17/13         17/15/11         18/17/14         20/19/2           FLUID DEGRADATION         method         limit/base         current         history1         history1	Potassium	ppm	ASTM D5185m	>20	0	<1	2
FLUID CLEANLINESS       method       limit/base       current       history1       history1         Particles >4µm       ASTM D7647       694       1679       9392         Particles >6µm       ASTM D7647       >1300       166       915       3798         Particles >14µm       ASTM D7647       >80       19       156       91         Particles >14µm       ASTM D7647       >20       5       52       6         Particles >21µm       ASTM D7647       >20       5       52       6         Particles >38µm       ASTM D7647       >4       0       8       0         Particles >71µm       ASTM D7647       >3       0       1       0         Oil Cleanliness       ISO 4406 (c)       >/17/13       17/15/11       18/17/14       20/19/3         FLUID DEGRADATION       method       limit/base       current       history1       history1	Water	%	ASTM D6304	>0.05	<b>A</b> 0.331	▲ 0.172	0.007
Particles >4µm       ASTM D7647       694       1679       9392         Particles >6µm       ASTM D7647       >1300       166       915       3798         Particles >14µm       ASTM D7647       >80       19       156       91         Particles >14µm       ASTM D7647       >20       5       52       6         Particles >21µm       ASTM D7647       >20       5       52       6         Particles >38µm       ASTM D7647       >4       0       8       0         Particles >71µm       ASTM D7647       >3       0       1       0         Oil Cleanliness       ISO 4406 (c)       >/17/13       17/15/11       18/17/14       20/19/1         FLUID DEGRADATION       method       limit/base       current       history1       history1	ppm Water	ppm	ASTM D6304	>500	<b>A</b> 3310	<mark>▲</mark> 1720	73.3
Particles >6μm         ASTM D7647         >1300         166         915         3798           Particles >14μm         ASTM D7647         >80         19         156         91           Particles >21μm         ASTM D7647         >20         5         52         6           Particles >38μm         ASTM D7647         >4         0         8         0           Particles >38μm         ASTM D7647         >4         0         10         0           Particles >71μm         ASTM D7647         >3         0         1         0           Oil Cleanliness         ISO 4406 (c)         >/17/13         17/15/11         18/17/14         20/19/2           FLUID DEGRADATION         method         limit/base         current         history1         history1	FLUID CLEANL	INESS	method	limit/base	current	history1	history2
Particles >14µm       ASTM D7647       >80       19       156       ▲ 91         Particles >21µm       ASTM D7647       >20       5       52       6         Particles >38µm       ASTM D7647       >4       0       8       0         Particles >38µm       ASTM D7647       >3       0       1       0         Particles >71µm       ASTM D7647       >3       0       1       0         Oil Cleanliness       ISO 4406 (c)       >/17/13       17/15/11       18/17/14       20/19/1         FLUID DEGRADATION       method       limit/base       current       history1       history1	Particles >4µm		ASTM D7647		694	1679	9392
Particles >21μm         ASTM D7647         >20         5         52         6           Particles >38μm         ASTM D7647         >4         0         8         0           Particles >38μm         ASTM D7647         >4         0         8         0           Particles >71μm         ASTM D7647         >3         0         1         0           Oil Cleanliness         ISO 4406 (c)         >/17/13         17/15/11         18/17/14         20/19/2           FLUID DEGRADATION         method         limit/base         current         history1         history1	Particles >6µm		ASTM D7647	>1300	166	915	▲ 3798
Particles >38µm         ASTM D7647         >4         0         8         0           Particles >71µm         ASTM D7647         >3         0         1         0           Oil Cleanliness         ISO 4406 (c)         >/17/13         17/15/11         18/17/14         20/19/3           FLUID DEGRADATION         method         limit/base         current         history1         history1	Particles >14µm		ASTM D7647	>80	19	<b>1</b> 56	<b>9</b> 1
Particles >71μm         ASTM D7647         >3         0         1         0           Oil Cleanliness         ISO 4406 (c)         >/17/13         17/15/11         18/17/14         20/19/1           FLUID DEGRADATION         method         limit/base         current         history1         history1	Particles >21µm		ASTM D7647	>20	5	52	6
Particles >71μm         ASTM D7647         >3         0         1         0           Oil Cleanliness         ISO 4406 (c)         >/17/13         17/15/11         18/17/14         20/19/1           FLUID DEGRADATION         method         limit/base         current         history1         history1	Particles >38µm		ASTM D7647	>4	0	8	0
Oil Cleanliness       ISO 4406 (c)       >/17/13       17/15/11       18/17/14       20/19/1         FLUID DEGRADATION       method       limit/base       current       history1       history1			ASTM D7647	>3	0	1	0
-	Oil Cleanliness				17/15/11	18/17/14	▲ 20/19/14
Acid Number (AN) mg KOH/g ASTM D8045 0.4 0.28 0.34 0.33	FLUID DEGRAD	DATION	method	limit/base	current	history1	history2
(07:10) Pour 1 Contact/Location: Sonvice Manager THEP	Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	0.28	0.34	0.33

Sample Rating Trend

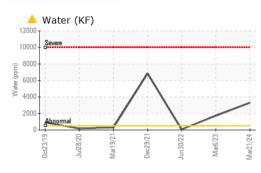
WATER

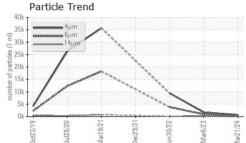
Report Id: THERICTX [WUSCAR] 06144265 (Generated: 04/16/2024 10:07:10) Rev: 1

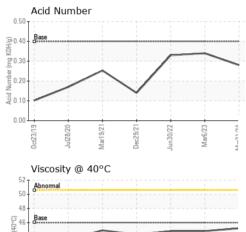
Contact/Location: Service Manager - THERICTX

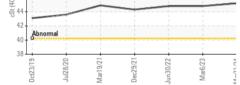


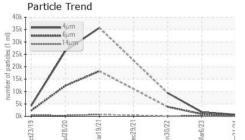
## **OIL ANALYSIS REPORT**





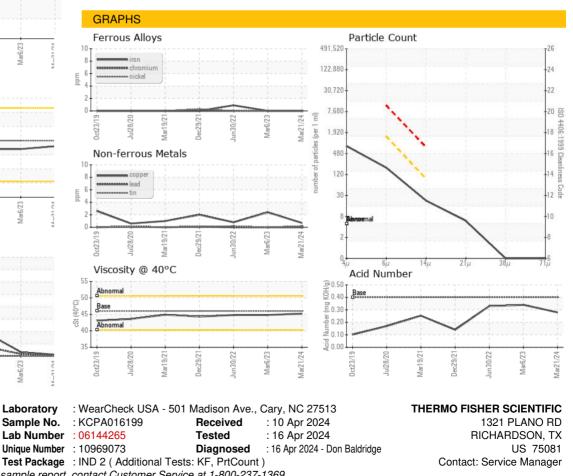






VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	- HAZY	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	<b>A</b> 0.2%	▲ 0.2%	NEG
Free Water	scalar	*Visual		NEG	<b>▲</b> 1.0	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	45.2	44.8	44.8
SAMPLE IMAGES	6	method	limit/base	current	history1	history2
Color						

Bottom



To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) T: F:

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Certificate 12367

Contact/Location: Service Manager - THERICTX