

ANDSON BIOTECH

SAR EXEMPTION REPORT

SCOPE OF WORK

SAR EXEMPTION – DYNACHIP X1

REPORT NUMBER

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RF EXPOSURE REPORT

Report Number: 106370695ATL-005

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Model / HVIN: Dynachip X1

FCC ID: 2BSUS-DYNAX1

IC: 34747-DYNAX1

Standards: FCC Title 47 CFR Parts 1.1307
RSS-102, Issue 6

Test Location

Intertek
1950 Evergreen Blvd., Suite 100
Duluth, GA 30096 USA
FCC Designation: US1046
CAB Designator: US0128

Client

Andson Biotech
1705 Commerce Dr NW
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1 Introduction and Conclusion

RF Exposure measurements were performed on the product constructed as described in Section 4.

Based on the results of our investigation, we have concluded the product under evaluation complies with the standard(s) indicated. The results obtained in this test report pertain only to the item(s) evaluated. Intertek does not make any claims of compliance for samples or variants which were not evaluated.

2 Evaluation Summary

Section	Test full name	Result
0	SAR Exemption (FCC Title 47 CFR Part 1.1307)	Compliant
6	SAR Exemption (RSS-102 Issue 6)	Compliant

3 Client Information

This evaluation was performed at the request of:

Client: Andson Biotech
1705 Commerce Dr NW Suite 100
Atlanta, GA 30318 USA

Contact: Rob Grier

Email: Rgrier@andsonbiotech.com

4 Description of Equipment Under Test and Variant Models

Manufacturer: Andson Biotech
1705 Commerce Dr NW Suite 100
Atlanta, GA 30318 USA

Equipment Under Test			
Description	Manufacturer	Model Number	Serial Number
Electrospray ionization mass spectrometry sample preparation platform	Andson Biotech	DynaChip X1	Not Labeled

Receive Date:	24 November 2025
Received Condition:	Good
Type:	Production

Description of Equipment Under Test (provided by client)

Andson's DynaChip X1 sample preparation platform enables streamlined sample preparation for electrospray ionization mass spectrometry. The X1 is deployed in climate-controlled laboratories for R&D, process development, and QC purposes. The system itself does not perform the biochemical analysis but rather accepts samples and isolates chemicals of interest from the media or formulation buffers via a consumable microfluidic device (Andson Dynachip 40) using the principal of tangential flow filtration. The conditioned sample is then infused into the mass spectrometer via a vendor agnostic fluidic coupling. The system includes various pumps, valves, and sensors for fluid handling and intelligent feedback as well as a touchscreen for user control. The system has RFID read/write capabilities for logging data associated with the consumable microfluidic device as well as Wi-Fi (via Wi-Fi dongle)/ethernet connectivity for remote access and control.

Radio/Receiver Characteristics	
Frequency Range	13.56MHz
Field Strength (3m):	37.42dBµV/m
Antenna Type	Loop

4.1 Justification

For this evaluation, the fundamental field strength measured at 3 meters was used to calculate the resultant power density at a distance of 20cm. Field strength data was obtained from Intertek test report 106370695ATL-006.

5 Maximum Permissible Exposure Criteria

Per 447498 D01 General RF Exposure Guidance v06 Section 4.3.1, for frequencies below 100 MHz, the following may be considered for SAR test exclusion (also illustrated in Appendix C):

- 1) For test separation distances > 50 mm and < 200 mm, the power threshold at the corresponding test separation distance at 100 MHz in step b) is multiplied by $[1 + \log(100/f(\text{MHz}))]$
- 2) For test separation distances ≤ 50 mm, the power threshold determined by the equation in c) 1) for 50 mm and 100 MHz is multiplied by $\frac{1}{2}$.

Appendix C

SAR Test Exclusion Thresholds for < 100 MHz and < 200 mm

Approximate SAR test exclusion power thresholds at selected frequencies and test separation distances are illustrated in the following table. The equation and threshold in 4.3.1 must be applied to determine SAR test exclusion.

MHz	< 50	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	mm
100	237	474	481	487	494	501	507	514	521	527	534	541	547	554	561	567	mW
50	308	617	625	634	643	651	660	669	677	686	695	703	712	721	729	738	
10	474	948	961	975	988	1001	1015	1028	1041	1055	1068	1081	1095	1108	1121	1135	
1	711	1422	1442	1462	1482	1502	1522	1542	1562	1582	1602	1622	1642	1662	1682	1702	
0.1	948	1896	1923	1949	1976	2003	2029	2056	2083	2109	2136	2163	2189	2216	2243	2269	
0.05	1019	2039	2067	2096	2125	2153	2182	2211	2239	2268	2297	2325	2354	2383	2411	2440	
0.01	1185	2370	2403	2437	2470	2503	2537	2570	2603	2637	2670	2703	2737	2770	2803	2837	

5.1 Calculations

Using linear interpolation on the table in Appendix C, the SAR exclusion at 13.56MHz at a distance of <50mm = **459mW**

$$FS_{MEA} = 37.42\text{dB}\mu\text{V/m @3 meters} = 74.302\mu\text{V/m} = 0.000074 \text{ V/m}$$

$$TP_W = (FS_{V/M} \times D)^2 / 30$$

$$TP_{mW} = (0.000074 \times 3)^2 / 30 \times 1000 = \mathbf{0.0000166mW}$$

Notes:

- 1) The highest field strength measurement was obtained from Intertek report #106370695ATL-006.

5.2 Results

The maximum output power is less than the SAR exclusion limits for any separation distance, and therefore, no RF exposure evaluation is required.

6 ISED Routine Evaluation Exemption Criteria

RSS-102 Issue 6 § 6.3: SAR exemption limits

Devices operating at or below the applicable output power levels (adjusted for tune-up tolerance) specified in table 11, based on the separation distance, are exempt from SAR evaluation. The separation distance, defined as the distance between the user and/or bystander and the antenna and/or radiating element of the device or the outer surface of the device, shall be less than or equal to 20 cm for these exemption limits to apply.

Table 11: Power limits for exemption from routine SAR evaluation based on the separation distance

Frequency (MHz)	≤ 5 mm (mW)	10 mm (mW)	15 mm (mW)	20 mm (mW)	25 mm (mW)	30 mm (mW)	35 mm (mW)	40 mm (mW)	45 mm (mW)	> 50 mm (mW)
≤ 300	45	116	139	163	189	216	246	280	319	362
450	32	71	87	104	124	147	175	208	248	296
835	21	32	41	54	72	96	129	172	228	298
1900	6	10	18	33	57	92	138	194	257	323
2450	3	7	16	32	56	89	128	170	209	245
3500	2	6	15	29	50	72	94	114	134	158
5800	1	5	13	23	32	41	54	74	102	128

6.1 Calculations

Limit at a distance of <5mm for any frequency <300MHz = **45mW**

$FS_{MEA} = 37.42 \text{ dB}\mu\text{V/m @3 meters} = 74.302 \mu\text{V/m} = 0.000074 \text{ V/m}$

$TP_W = (FS_{V/M} \times D)^2 / 30$

$TP_{mW} = (0.000074 \times 3)^2 / 30 \times 1000 = \mathbf{0.00000166mW}$

Notes:

- 1) The highest field strength measurement was obtained from Intertek report #106370695ATL-006.

6.2 Results

The maximum output power is less than the SAR exclusion limits for any separation distance, and therefore, no RF exposure evaluation is required.

7 Revision History

Revision Level	Date	Prepared By	Reviewed By	Notes
0	30 January 2026	JOP	US	Original Issue
1	25 February 2026	JOP	US	• Updated the method for calculating the EIRP

END OF REPORT