

Summary of PEMF and EMF testing of Purple MediCrystal Amethyst Agate PEMF Photon mats

Purple MediCrystal Amethyst Agate PEMF Photon mats feature Pulsed Electromagnetic Fields System. The PEMF function allows to select 4 Hz, 8 Hz, 10 Hz or 14 Hz frequency of magnetic pulsation. (1 Hz = 1 pulse per second)

The mini mat has two PEMF coils, midsize mat comes with six coils, professional and single size mats with eight PEMF coils positioned across two parallel lines extending from the feet zone to the logo area of the mat.

PEMF for different frequency settings over one coil

Researched by C.D. Lytle, PhD, in February 2020

Mat: Purple MediCrystal Amethyst Agate PEMF Photon Mini Mat 20"x32"

Mat settings: PEMF On, Heat and Photo Off

Controllers: L-40PV-6 for 10 Hz or L-40PVA-6 50 for 4, 8, and 14 Hz 50 Gauss pulses

Magnetometer: EMF Tester PCE-EMF823. The quoted range is 30-300 Hz, however, careful independent comparison indicated it was accurate down to at least 8Hz.

Range used: 0 - 20000 mGauss

Magnetometer was laid horizontally on mat to reduce effect of uneven surface. * Distance from PEMF coil to mat surface is unknown.

PEMF values for different frequency settings over coil at 17.5 inches from top of heated mat

Frequency setting Meter reading

<u>Hz</u>	<u>mGauss</u>
4	3693
8	3530
10	3883
14	3863
<u>Average</u>	<u>3742</u>

*The sensor of the magnetometer is located in the center of the top end of the meter. When the meter was placed horizontally, the sensor was actually 5/8" above the mat surface.

Observations:

- 1. Measured PEMF values were not significantly different for the different pulse frequencies and were approximately 7.5% of the PEMF 50 Gauss rated value, presumably because of distance and materials between the PEMF coils and the magnetometer sensor.**

Profile of PEMF along center length of mat

Mat: Purple MediCrystal Amethyst Agate PEMF Photon Mini Mat 20"x32"

Controller: L-40PV-6 10 Hz, 50 Gauss pulses

Mat settings: PEMF On, Heat and Photo Off

Magnetometer: EMF Tester PCE-EMF 823

Range used: 0 - 20000 mGauss

Magnetometer was laid horizontally on mat to reduce effect of uneven surface, sensor was 5/8" (1.6 cm) above mat surface. Distance from PEMF coil to mat surface is unknown.

PEMF measurements made along center line of mat, distances measured from top edge of heated area

Distance from top PEMF intensity

Inches mGauss

0 50

2.5 150

5 520

7 1465

9* 3435

11 1090

13 92

15 735

17.5* 3640

20 845

23 245

* Denotes PEMF peaks, presumably over PEMF coils spaced along centerline of mat

Observations:

1. PEMF levels dropped 60-80% from the peak value within 2 inches, 85-93% drop off within 4 inches.

Profile of PEMF across mat

Mat: Purple MediCrystal Amethyst Agate PEMF Photon Mini Mat 20"x32"

Controller: L-40PV-6 10 Hz only 50 Gauss pulses

Mat settings: PEMF On, Heat and Photo Off

Magnetometer: EMF Tester PCE-EMF 823

Range used: 0 - 20000 mGauss

Magnetometer was laid horizontally on mat to reduce effect of uneven surface, sensor was 5/8" (1.6 cm) above mat surface. Distance from PEMF coil to mat surface is unknown.

PEMF measurements made along line parallel to crystal tubes at same distance measured from top

Distance from top (inches)	PEMF intensity (mGauss)						
	Distances from left side of mat (inches)						
	2	5	7	9*	11	13	16
9	210	1025	1985	3413	1455	755	205

*position associated with apparent coil

Observation:

1. **Significant drop of PEMF from maximum: 50% within 2 inches, 75% within 4 inches, not as severe as measured along mat center line.**

PEMF measured at different heights over one coil

Mat: Purple MediCrystal Amethyst Agate PEMF Photon Mini Mat 20"x32"

Mat settings: PEMF On, Heat and Photo Off

Controllers: L-40PVA-6, 14 Hz 50 Gauss pulses

Magnetometer: EMF Tester PCE-EMF823.

Range used: 0 - 20000 mGauss

Magnetometer was held horizontally on or over the mat

PEMF measurements above high PEMF value*

Height above mat surface	PEMF	Intensity drop off
Inches	mGauss	%
0	3823	
1	1380	64
2	625	84
4	170	95
6	30	99

* measured at 17.5 inches from top of mat over second coil

Conclusion:

1. PEMF value dropped off faster above the mat than along the mat surface.

Distribution of 100 mGauss PEMF over mat

Mat: Purple MediCrystal Amethyst Agate PEMF Photon Mini Mat 20"x32"

Mat settings: PEMF On, Heat and Photo Off

Controllers: L-40PV-6 for 10 Hz or L-40PVA-6 50 for 4, 8, and 14 Hz 50 Gauss pulses

Magnetometer: TriField EMF Meter 100XE. Range used: 0 - 100 mGauss

Magnetometer was held at measured distances above the mat.

Position above mat for 100 mGauss reading

Distance from top of mat (inches)	Distance from right side of mat (inches)	Height above mat that read 100 mGauss (inches)
5	4	7
	9	8
	14	7
9	4	10.5
	9	7
	14	10.5
13	4	6.5
	9	8.5
	14	6.5
17.5	4	8
	9	8
	14	8.5
22	4	9
	9	5.5
	14	8.5

Conclusion: There is a 'cloud' of 100 mGauss PEMF over at least half of the mat extending at least 5.5 inches above the mat surface.

Effectiveness of EMI (Electro-Magnetic Interception)

Mat: Purple MediCrystal Amethyst Agate PEMF Photon Mini Mat 20"x32"

Mat settings: Heat On, PEMF and Photon Off

Controllers: L-40PV-6

Magnetometer: Trifield EMF Meter 100XE, range used: 0.2 - 3 mGauss

Magnetometer was laid horizontally on mat to reduce effect of uneven surface. Distance from heating elements to mat surface is unknown.

Position on mat for EMF reading above 0.2 mGauss*

Distance from top of mat (inches)	Distance from left side of mat (inches)	EMF reading mGauss
9	9	1.6
13	9	1.6
17.5	9	1.6

*** No readings over the mat were at or above 0.2 mGauss, the limit of detectability of the meter, except the "hot spots." In addition, when the heat setting was reduced, the readings over the "hot spots" immediately dropped to undetectable.**

Conclusions:

1. Three 'hot spots' were located, all along the center line of the mat.
2. Two such 'hot spots' were approximately over the presumed PEMF coils.
3. The third 'hot spot' was between the PEMF coils near the position of very low PEMF when the PEMF was turned on.
4. The 'hot spots' relate to the safety sensors or bimetal switches functioning

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