

ศูนย์ทดสอบผลิตภัณฑ์ไฟฟ้า และอิเล็กทรอนิกส์ สวทช.



National Science and Technology Development Agency



REPORT No. 10 / 65-85

# **TEST REPORT**

Report No.....: 10/65-85

Equipment Under Test (EUT) No ..: EM-65-0169

TISI No.....:: -

Testing Laboratory.....: Electrical and Electronic Products Testing Center

Address ...... 141 Thailand Science Park, Phahonyothin Road, Khlong Nueng,

Klong Luang, Pathum Thani 12120, Thailand.

Applicant's name ...... AF INNOVATION CO., LTD.

Buengkum, Bangkok 10230

Manufacturer's Name...... AF INNOVATION CO., LTD.

Address ...... 377/22 One Building 3<sup>rd</sup>., Fl., Klong Lamchiak Rd., Nuanchan

Buengkum, Bangkok 10230

Standard.....: EN 61000-6-1:2007, EN 61000-6-3:2007+A1:2011,

EN 61000-3-2:2019, EN 61000-3-3:2013+A1:2019

Non-standard test method : -

Test item description ...... Air Sterilizing Purifier

Trademark.....:

Model/Type reference .....: ASP-20

S/N.....

Ratings ...... 230Vac, 50 Hz (L+N)

Date of receive ...... 7 December 2021

Date of issue: ...... 2 March 2022

Tested by

Approved by

(MR. Itsarapong Roolpram)

SAYADOWP

Engineer

(MR. Anake Meemoosor)

**Operation Manager** 



National Science and Technology Development Agency



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## 1 SUMMARY OF TESTING

REPORT No. 10 / 65-85

This product was tested and complied according to following specification standards:

EN 61000-6-3 Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for equipment in residential environments.

EN 61000-6-1 Electromagnetic compatibility (EMC). Generic standards. Immunity standard for residential, commercial and light-industrial environments.

EN 61000-3-2 Limits - Limits for harmonic current emissions (equipment input current ≤16A per phase).

EN 61000-3-3 Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage

supply systems, for equipment with rated current ≤16A per phase and subject to conditional connection.

Test Item Test Specification		Test Specification Test Method		
Conducted Emission	EN61000-6-3:2007+A1:2011	CISPR 16-2-3:2016+A1:2019	PASS	
Radiated Emission	EN61000-6-3:2007+A1:2011	CISPR 16-2-3:2016+A1:2019	PASS	
Harmonic Emission	EN 61000-3-2:2014	EN 61000-3-2:2014	PASS	
Voltage Fluctuation	EN 61000-3-3:2013	EN 61000-3-3:2013	PASS	
	EN61000-6-1:2007	IEC 61000-4-2:2008	PASS	
Electrostatic Discharge	8kV air, 4kV contact, Criterion B	(Ed 2.0)		
	EN61000-6-1:2007			
	80MHz to 1000 MHz, 3V/m 1KHz 80% AM			
8 2 1 1 2	Criterion A	IEC 61000-4-3:2010	DA 00	
Radiated Immunity	EN61000-6-1:2007	(Ed 3.1)	PASS	
	1400MHz to 6000 MHz, 3V/m 1KHz 80% AM			
	Criterion A			
Figure 1 Foot Topics	EN61000-6-1:2007	IEC 61000-4-4:2012	DACC	
Electrical Fast Transient	1kV 5/50ns 5kHz, Criterion B	(Ed 2.0)	PASS	
0	EN61000-6-1:2007	IEC 61000-4-5:2017	DAGO	
Surge	1.2/50us, 2kV CM, 1kV DM, Criterion B	(Ed2.0)	PASS	
Conducted Immunity			PASS	
	3V 1KHz 80% AM, Criterion A	(Ed 3.0)		
Power frequency	EN61000-6-1:2007	IEC 61000-4-8:2009	DAGG	
Magnetic	3A/m 50Hz, Criterion A	(Ed 2.0)	PASS	



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Test Item	Test Specification	Test Method	Result
	EN61000-6-1:2007	IEC 61000-4-11:2018 (Ed2.0)	
Voltage Dips	Dip 0% 0.5P, Dip 0% 1P, Dip 70% 25P		PASS
	Interrupt 250P Criterion C		

Note: -



National Science and Technology Development Agency, Ministry of Science and Technology

#### **TEST REPORT**

#### IEC 60335-2-65

# Safety of household and similar electrical appliances Part II: particular requirements for air-cleaning appliances

Equipment Under Test (EUT) No...: ST-65-0128

Total number of pages...... 91

Testing Laboratory ..... Electrical and Electronic Products Testing Center (PTEC)

Address...... 141 Thailand Science Park Innovation Cluster 2

Phahonyothin Rd. Khlong Nueng, Khlong Luang, Pathum Thani

12120, Thailand.

Applicant's name...... AF INNOVATION Co., Ltd.

Address...... 377/22 One Building, 3rd Fl, Khlong lamchiak Rd., Nuanchan,

Buengkum, Bangkok 10230, Thailand

Test specification:

Standard..... IEC 60335-2-65:2002, COR1:2004, AMD1:2008, AMD2:2015 in

conjunction with IEC 60335-1:2010, COR1:2010, COR2:2011,

AMD1:2013, COR1:2014, AMD2:2016, COR1:2016

Test Report Form No...... IEC60335\_2\_65L

Non-standard test method...... N/A

Test item description..... Air Sterilizing Purifier

Trade Mark .....:

Natural AirFresh

Manufacturer..... AF INNOVATION Co., Ltd.

Model/Type reference..... ASP-20

Serial number.....: ASP02064090000001

Rating(s)...... 220V~, 50Hz, 22W, Class II

Date of receipt of test item(s) ......: 07 December 2021

Dates tests performed...... 10 - 21 January 2022

Date of issue...... 31 January 2022

Tested by

(Mr. Adipat Chaloemngam) Engineer Approved by

(Mr. Ruengrit Ninae) Operation Manager



National Science and Technology Development Agency, Ministry of Science and Technology

Test item particulars	Air Sterilizing Purifier
Classification of installation and use:	Portable appliance
Supply Connection:	Detachable cord with a plug
Class of protection against electrical shock:	
Type of cord attachment:	Type X attachment
Steaming function:	N/A
Automatic programmes	N/A
Appliance for building-in:	N/A
Appliance for fixing to a wall	N/A
Browning function:	N/A
Degree of protection against moisture	IPX0
Possible test case verdicts:	
- test case does not apply to the test object:	N/A
- test object does meet the requirement:	P(Pass)
- test object does not meet the requirement:	F(Fail)
500	

#### General remarks:

Test marked (\*) in this Report are not included in the TISI Accreditation Schedule for our Laboratory.

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"(see remark #)" refers to a remark appended to the report.

"(see Annex#)" refers to an annex appended to the report.



National Science and Technology Development Agency, Ministry of Science and Technology

### Summary of testing:

The product fulfils the requirements of IEC 60335-2-65:2002, COR1:2004, AMD1:2008, AMD2:2015 in conjunction with IEC 60335-1:2010, COR1:2010, COR2:2011, AMD1:2013, COR1:2014, AMD2:2016, COR1:2016

#### Copy of marking plate:

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National Science and Technology Development Agency



# **TEST REPORT**

IEC 62471

# Photobiological Safety of Lamps and Lamp Systems

TISI No.....

Testing Laboratory Name ..... Electrical and Electronic Products Testing Center

Address ...... 141 Thailand Science Park Innovation Cluster 2

Phahonyothin Rd., Khlong Nueng, Khlong Luang, Pathum Thani

12120, Thailand.

Applicant's Name..... AF INNOVATION CO., LTD.

Buengkum, Bangkok 10230, Thailand.

Manufacturer's Name ..... AF INNOVATION CO., LTD.

Buengkum, Bangkok 10230, Thailand.

Test specification

Standard ..... IEC 62471-2006

Non-standard test method ...... N/A

Test item description..... Air Sterilizing Purifier

Trademark ...... Natural AirFresh

Model and/or type reference ..... ASP-20

Serial number .....

Date of receipt of test item ...... December 07, 2021

Date(s) of performance of test ...... December 16, 2021

Date of report issue ...... December 21, 2021

Tested by

Approved by

Mr. Weerasak Rungrotnetikul

Mr Weeravit Ranghom



National Science and Technology Development Agency





## Engineer

## Operation manager 3

EUT Description		
Description	Air Sterilizing Purifier	
Trademark	Natural AirFresh	
Model	ASP-20	
Serial number		
Ratings	220VAC 50Hz, 22W	

# Summary of testing:

Tests performed (name of test and test clause):

Measurement of irradiance, spectrum, and radiance as prescribed by IEC 62471-2006.

The models complied with the requirements of Exempt Group LED Product according to IEC 62471:2006

# Summary of compliance with National Differences:

The products complied with the requirements of Exempt Group LED Product according to EN 62471:2008

# Copy of marking:





National Science and Technology Development Agency, Ministry of Science and Technology

#### **TEST REPORT**

#### IEC 60335-2-65

# Safety of household and similar electrical appliances Part II: particular requirements for air-cleaning appliances

Test Report No. ..... 356/65-005

Equipment Under Test (EUT) No...: ST-65-0319

Total number of pages...... 92

Testing Laboratory..... Electrical and Electronic Products Testing Center (PTEC)

Address...... 141 Thailand Science Park Innovation Cluster 2

Phahonyothin Rd. Khlong Nueng, Khlong Luang, Pathum Thani

12120, Thailand.

Applicant's name...... AF INNOVATION Co., Ltd.

Address...... 377/22 One Building, 3rd Fl, Khlong lamchiak Rd., Nuanchan,

Buengkum, Bangkok 10230, Thailand

Test specification:

Standard..... IEC 60335-2-65:2002, COR1:2004, AMD1:2008, AMD2:2015 in

conjunction with IEC 60335-1:2010, COR1:2010, COR2:2011,

AMD1:2013, COR1:2014, AMD2:2016, COR1:2016

Test Report Form No...... IEC60335\_2\_65L

Non-standard test method...... N/A

Test item description...... Air Sterilizing Purifier

Trade Mark .....:

Natural AirFresh

Manufacturer..... AF INNOVATION Co., Ltd.

Model/Type reference..... ASP-40

Serial number...... ASP04064120000023

Rating(s)...... 220V~, 50Hz, 43W, Class II

Date of receipt of test item(s) .....: 09 March 2021

Dates tests performed...... 14 – 25 March 2022

Date of issue..... 30 March 2022

Tested by

Approved by

(Mr. Adipat Chaloemngam)

Engineer

(Mr. Ruengrit Ninae) Operation Manager



National Science and Technology Development Agency, Ministry of Science and Technology

Test item particulars	Air Sterilizing Purifier	
Classification of installation and use:	Portable appliance	
Supply Connection:	Detachable cord with a plug	
Class of protection against electrical shock:		
Type of cord attachment:	Type X attachment	
Steaming function:	N/A	
Automatic programmes	N/A	
Appliance for building-in	N/A	
Appliance for fixing to a wall	N/A	
Browning function	N/A	
Degree of protection against moisture	IPX0	
Possible test case verdicts:	*	
- test case does not apply to the test object:	N/A	
- test object does meet the requirement:	P(Pass)	
- test object does not meet the requirement:	F(Fail)	
2V 9		

#### General remarks:

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National Science and Technology Development Agency, Ministry of Science and Technology

#### Summary of testing:

The product fulfils the requirements of IEC 60335-2-65:2002, COR1:2004, AMD1:2008, AMD2:2015 in conjunction with IEC 60335-1:2010, COR1:2010, COR2:2011, AMD1:2013, COR1:2014, AMD2:2016, COR1:2016

#### Copy of marking plate:

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Model	ASP-40	
Serial No	ASP04064120000023	
Rated Voltage	220	Vac
Frequency	50	Hz
Current	0.19	Α
Power	43	W
Net Weight	2.0	Kgs
Manufactured date	092564	

# Product by AF INNOVATION CO., LTD.

377/22 One Building 3 rd Fl., Khlong Lamchiak Rd., Nuanchan, Buengkum, Bangkok 10230, Thailand. Tel: +66(0) 2946-0224-5 Fax: +66(0) 2946-0226



เครื่องใช้ไฟฟ้า ประเภท II



National Science and Technology Development Agency, Ministry of Science and Technology

#### **TEST REPORT**

#### IEC 60335-2-65

# Safety of household and similar electrical appliances Part II: particular requirements for air-cleaning appliances

Test Report No. ..... 356/65-006

Equipment Under Test (EUT) No...: ST-65-0320

Total number of pages...... 92

Testing Laboratory ...... Electrical and Electronic Products Testing Center (PTEC)

Phahonyothin Rd. Khlong Nueng, Khlong Luang, Pathum Thani

12120, Thailand.

Applicant's name...... AF INNOVATION Co., Ltd.

Address...... 377/22 One Building, 3rd Fl, Khlong lamchiak Rd., Nuanchan,

Buengkum, Bangkok 10230, Thailand

Test specification:

Standard..... IEC 60335-2-65:2002, COR1:2004, AMD1:2008, AMD2:2015 in

conjunction with IEC 60335-1:2010, COR1:2010, COR2:2011,

AMD1:2013, COR1:2014, AMD2:2016, COR1:2016

Test Report Form No. ..... IEC60335\_2\_65L

Non-standard test method...... N/A

Test item description..... Air Sterilizing Purifier

Trade Mark .....:

Natural AirFresh

Manufacturer..... AF INNOVATION Co., Ltd.

Model/Type reference..... ASP-80

Serial number...... : ASP08064120000009

Rating(s)..... 220V~, 50Hz, 86W, Class II

Date of receipt of test item(s) .....: 09 March 2021

Dates tests performed...... 21 – 29 March 2022

Date of issue...... 30 March 2022

Tested by

(Mr. Adipat Chaloemngam)

Engineer

Approved by

(Mr. Ruengrit Ninae) Operation Manager



National Science and Technology Development Agency, Ministry of Science and Technology

Test item particulars	Air Sterilizing Purifier
Classification of installation and use:	Portable appliance
Supply Connection:	Detachable cord with a plug
Class of protection against electrical shock:	
Type of cord attachment:	Type X attachment
Steaming function	N/A
Automatic programmes:	N/A
Appliance for building-in	N/A
Appliance for fixing to a wall	N/A
Browning function	N/A
Degree of protection against moisture	IPX0
Possible test case verdicts:	
- test case does not apply to the test object:	N/A
- test object does meet the requirement:	P(Pass)
- test object does not meet the requirement:	F(Fail)

#### General remarks:

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National Science and Technology Development Agency, Ministry of Science and Technology

## Summary of testing:

The product fulfils the requirements of IEC 60335-2-65:2002, COR1:2004, AMD 1:2008, AMD 2:2015 in conjunction with IEC 60335-1:2010, COR1:2010, COR2:2011, AMD 1:2013, COR1:2014, AMD 2:2016, COR1:2016

#### Copy of marking plate:

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# เครื่องฟอกกำจัดเชื้อโรคและมลพิษในอากาศ Air Sterilizing Purifier

Model	ASP-80	
Serial No	ASP08064120000009	
Rated Voltage	220	Vac
Frequency	50	Hz
Current	0.4	Α
Power	86	W
Net Weight	3.4	Kgs
Manufactured date	092564	

# Product by AF INNOVATION CO., LTD.

377/22 One Building 3 rd FL, Khlong Lamchiak Rd., Nuanchan, Buengkum, Bangkok 10230, Thailand. Tel: +66(0) 2946-0224-5 Fax: +66(0) 2946-0226



เครื่องใช้ไฟฟ้า ประเภท II



National Science and Technology Development Agency, Ministry of Science and Technology

#### **TEST REPORT**

#### IEC 60335-2-65

# Safety of household and similar electrical appliances Part II: particular requirements for air-cleaning appliances

Total number of pages..... 93

Testing Laboratory ...... Electrical and Electronic Products Testing Center (PTEC)

Address...... 141 Thailand Science Park Innovation Cluster 2

Phahonyothin Rd. Khlong Nueng, Khlong Luang, Pathum Thani

12120, Thailand.

Applicant's name...... AF INNOVATION Co., Ltd.

Buengkum, Bangkok 10230, Thailand

Test specification:

Standard..... : IEC 60335-2-65:2002, COR1:2004, AMD1:2008, AMD2:2015 in

conjunction with IEC 60335-1:2010, COR1:2010, COR2:2011,

AMD1:2013, COR1:2014, AMD2:2016, COR1:2016

Test Report Form No. ..... IEC60335\_2\_65L

Non-standard test method..... N/A

Test item description...... Air Sterilizing Purifier

Trade Mark .....:

Natural AirFresh

Manufacturer..... : AF INNOVATION Co., Ltd.

Model/Type reference..... ASP-480

Serial number.....: ASP48064090000013

Rating(s)..... 220V~, 50Hz, 515W, Class I

Date of receipt of test item(s) ......: 19 July 2022

Dates tests performed.....: 25 July – 09 August 2022

Date of issue .....: 11 August 2022

Tested by

(Mr. Adipat Chaloemngam) Engineer Approved by

(Mr. Ruengrit Ninae) Operation Manager

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National Science and Technology Development Agency, Ministry of Science and Technology

Test item particulars	Air Sterilizing Purifier
Classification of installation and use:	Moveable appliance
Supply Connection:	Detachable cord with a plug
Class of protection against electrical shock:	
Type of cord attachment:	Type X attachment
Steaming function:	N/A
Automatic programmes:	N/A
Appliance for building-in:	N/A
Appliance for fixing to a wall	N/A
Browning function	N/A
Degree of protection against moisture	IPX0
Possible test case verdicts:	
- test case does not apply to the test object:	N/A
- test object does meet the requirement:	P(Pass)
- test object does not meet the requirement:	F(Fail)

#### General remarks:

Test marked (\*) in this Report are not included in the TISI Accreditation Schedule for our Laboratory.

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National Science and Technology Development Agency, Ministry of Science and Technology

## Summary of testing:

The product fulfils the requirements of IEC 60335-2-65:2002, COR1:2004, AMD1:2008, AMD2:2015 in conjunction with IEC 60335-1:2010, COR1:2010, COR2:2011, AMD1:2013, COR1:2014, AMD2:2016, COR1:2016

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REPORT No. 356/65-007 PTEC-LB-FR-356 PAGE 3 OF 93 REV.0/22-11-2021