



Single nozzle (with hood)  
72  $\mu\text{m}$

Double nozzle  
72  $\mu\text{m}$

Adjustable nozzle

Fine mist 3 nozzle  
50  $\mu\text{m}$

# Test Report (Translation)

## Inspection Equipment and Instruments

No	Equipment	Model	Code.
1	Electronic Scale	TCS-30	WS30RS-HS
2	Toolmaker's Microscopes	XTL20	0105-549
3	Droplet Spectrometer	/	LP-01
4	Multimeter	VC9802A	258708
4	Megohmmeter	ZC25-3	102442

# Test Report (Translation)

No	Item	Unit	Index	Result	No. of Failures
1	The appearance of the whole machine	/	The exposed parts of the electric sprayer are clean, free of oil, rust and obvious scars; the high-voltage static output line, low-voltage power line, and infusion hose of the nozzle cannot be seen from the appearance	M	0
2	The appearance of the electrostatic generator	/	The appearance is smooth and flat, without cracks and exposed components	M	0
3	Battery	/	Fully sealed maintenance lead-acid battery with 6V7AH	M	0
		V		6	0
4	General requirements for plastic parts	/	The plastic parts such as the tank body, base and handle, spray rod, nozzle and other plastic parts have complete appearance, smooth surface and uniform plasticization; no cold barriers, shrinkage holes, bubbles, penetrating impurities and flashing	M	0
5	Anti-loose structure of the lid	/	The lid and the barrel should be connected by thread, and the sealing surface should be equipped with a sealing ring	Threaded connection, with elastic sealing ring	0
6	Filter device	/	The filling port of the liquid storage tank should be equipped with a filter device	Have Filter	0
		mm	The filter mesh hole diameter is not more than 0.40		0
7	Integrity of parts	/	Complete machine parts, no missing parts	M	0
8	Welding requirements	/	Welded parts should be welded smoothly and firmly, without false or missing welding; no corrosive flux is required for welding	M	0
9	Fastening requirements	/	Fasteners are fastened, firm, and not loose	M	0
10	Electrical components installation requirements	/	The static generator, motor, battery, infusion pump are installed firmly	M	0

# Test Report (Translation)

No.	Item	Unit	Index	Results	No. of Failures
11	Moving parts requirements	/	When the nozzle is turned off, the nozzle atomization dial can be flexibly rotated by hand; the liquid flow switch on the handle can be pressed or released by hand.	M	0
12	Median droplet diameter	μm	40~150	72	0
13	Fog droplet coverage density on the front	drop/cm <sup>2</sup>	≥200	>300	0
14	Electrostatic adsorption effect on the reverse side	drop/cm <sup>2</sup>	≥100	>180	0
15	Uniformity of mist flow	/	uniform and continuous mist flow	M	0
16	Mark the tolerance of the rated capacity	/	the percentage of the actual capacity of the storage tank to the rated capacity is not less than 95%	100%	0
17	The lid is sealed	/	after the lid is tightened, the seal can prevent the leakage of liquid medicine	No leakage	0
18	Leakage of liquid medicine	/	The infusion pump is running, the shut-off valve is in the "open" or "closed" position, and there is no liquid leakage in all parts and connections except for the nozzle	No leakage	0
19	Carry maximum quality	/	The weight of the whole machine after the sprayer is injected with the rated capacity of water is not more than 11.0kg	10.3	0
20	General insulation performance	/	General insulation performance / electrical system should adopt anti-falling measures	Have waterproof measures	0
		MΩ	The insulation resistance between the medicine barrel, the handle, the spray rod and the shell should not be less than 200 MΩ	>500	0
21	Control performance		The electrical switch and handle of the liquid storage tank should be able to correctly control the "on" and "off" of the corresponding motor, throttle valve and electrostatic generator	Control	0



(2006)国认监认字(015)号



2006000138Z

No: WTJ2007110

# 检 验 报 告

产品名称                     电动静电喷雾器                    

委托单位           太仓市金港植保器械科技有限公司          

检验类别                     委托检验                    

国家植保机械质量监督检验中心



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检验报告

# 国家植保机械质量监督检验中心

## 检验报告

№: WTJ2007110

共 4 页 第 1 页

产品名称	电动静电喷雾器	型号规格	3JWB
		商 标	雾星
委托单位	太仓市金港植保器械科技有限公司	检验类别	委托检验
生产单位	太仓市金港植保器械科技有限公司	样品等级	合格品
抽样地点	自送样	送样日期	2007 年 12 月 21 日
样品数量	整机 1 台	送 样 者	沈为国
抽样基数	/	生产日期	2007 年 12 月 08 日
检验依据	Q/320585 JGZ01-2007 《3JWB 电动静电喷雾器》		
检 验 结 论	<p style="text-align: center;">太仓市金港植保器械科技有限公司生产的 3JWB 型电动静电喷雾器样品经检验，所检项目符合企业标准 Q/320585 JGZ01-2007 规定的要求。</p> <p style="text-align: right;">签发日期 2007 年 12 月 26 日</p> <div style="text-align: right; margin-top: 10px;">  </div>		
备 注			

批 准: *plgrsz*  
批准人职务: 常务副主任

审核: *李成*

主检: *谭丰根*

一  
星  
牌  
机  
械

## 检验设备及仪器

序号	仪器、设备名称	型号规格	编号
一	电子台秤	TCS-30	WS30RS-HS
二	工具显微镜	XTL20	0105-549
三	雾滴粒谱仪	/	LP-01
四	万用表	VC9802A <sup>+</sup>	258708
五	兆欧表	ZC25-3	102442

检验日期: 2007 年 12 月 21 日

环境温度: 9 °C

量  
一  
专  
用



## 检验数据及结果

序号	项目名称	单位	质量指标	检验结果	不合格项次
1	整机外观	/	电动喷雾器的外露部件清洁、无油污、锈渍和明显伤痕；外观上看不到喷头的高压静电输出线、低压电源线、输液软管	符合要求	0
2	静电发生器外观	/	静电发生器外观光滑、平整，无裂缝和元件外露现象	符合要求	0
3	蓄电池	/	采用 6V7AH 的全密封免维护铅酸蓄电池	符合要求	0
		V	$\geq 6$	6	
4	塑料件一般要求	/	贮液桶体、底座及手柄、喷杆、喷头等塑料零部件外形完整、表面光洁、塑化均匀；无冷隔、缩孔、气泡、穿透性杂质及飞边	符合要求	0
5	桶盖防松结构	/	桶盖与桶体应以螺纹连接、其密封面应设置弹性密封圈	螺纹连接，有弹性密封圈	0
6	过滤装置	/	贮液桶体加液口应设有过滤装置	有过滤网	0
		mm	滤网孔直径不大于 0.40	$\leq 0.40$	
7	零部件完整性	/	整机零部件完整，无缺件	符合要求	0
8	焊接要求	/	焊接件应焊接平整、牢固，无虚焊、漏焊；不用有腐蚀作用的焊剂焊接	符合要求	0
9	紧固要求	/	紧固件紧固、牢靠，无松动	符合要求	0
10	电气元件安装要求	/	静电发生器、电机、电池、输液泵安装牢靠	符合要求	0

检验合格  
 章

## 检验数据及结果

序号	项目名称	单位	质量指标	检验结果	不合格项数
11	运动件要求	/	关机时, 喷头雾化转盘用手能够灵活转动; 手柄上液流开关用手按下或松开动作灵活	符合要求	0
12	雾滴中值直径	$\mu\text{m}$	40~150	72	0
13	正面雾滴覆盖密度	点/ $\text{cm}^2$	$\geq 200$	>300	0
14	反面静电吸附效果	点/ $\text{cm}^2$	$\geq 100$	>180	0
15	雾流均匀性	/	雾流均匀连续	符合要求	0
16	标示额定容量允差	/	贮液桶实际容量与额定容量的百分比不小于 95%	100%	0
17	桶盖密封	/	桶盖拧紧后, 密封处能防止药液渗漏	不渗漏	0
18	药液渗漏	/	输液泵运转输液进, 截流阀处于“开”或“关”位置, 除喷头外, 各零件及连接处无药液渗漏	不渗漏	0
19	背负最大质量	kg	喷雾器注入额定容量的水后的整机总质量不大于 11.0 kg	10.3	0
20	一般绝缘性能	/	电气系统应采取防水措施	有防水措施	0
		M $\Omega$	药桶、手柄、喷杆、外壳间的绝缘电阻值应不不于 200 M $\Omega$	>500	
21	控制性能	/	贮液桶电器开关、手柄应能正确控制相应电机、截流阀和静电发生器的“开”和“关”	能正确控制	0



# 中国国家强制性产品认证证书

证书编号: 2011041401000074

委托人名称、地址

太仓市金港植保器械科技有限公司/

江苏省苏州市太仓市太仓经济开发区东亭北路 12 号

生产者(制造商)名称、地址

太仓市金港植保器械科技有限公司/

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生产企业名称、地址

太仓市金港植保器械科技有限公司/

江苏省苏州市太仓市太仓经济开发区东亭北路 12 号

生产企业代码: D000569

产品名称和系列、型号、规格

3JWB-8 型、3JWB-16 型、3JWB-16A 型电动静电喷雾器

产品标准和技术要求

GB 10395.6: 农林拖拉机和机械 安全技术要求 第 6 部分: 植物保护机械

上述产品符合强制性产品认证实施规则

CNCA-C14-01: 2014 的要求, 特发此证。

发证日期: 2016 年 07 月 22 日 有效期至: 2021 年 07 月 21 日

证书有效期内本证书的有效性依据发证机构的定期监督获得保持。

本证书的相关信息可通过国家认监委网站 [www.cnca.gov.cn](http://www.cnca.gov.cn) 查询

(本证书为变更证书, 证书首次发证日期: 2011 年 08 月 02 日)



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<http://www.ocam.com.cn>

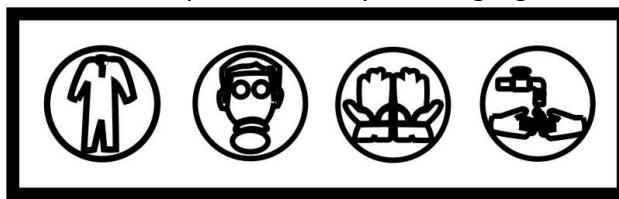
# ULV010 User Manual

Warning: If the solution overflows from the mouth of the barrel, and wet the outer surface of the barrel and the clothes and body of the operator, it will easily lose the electrostatic adsorption effect and cause poisoning and static leakage to stimulate the operator's skin. Therefore, be sure to tighten the lid during operation.

During operation, be sure to tighten the lid to prevent the liquid from overflowing from the mouth of the bucket. If the soluble powder is sprayed, the pump and nozzle should be cleaned in time, and charged after the operation. Keeping the spray bar tightly connected and the surface of the barrel dry and clean is very important to ensure the safe operation of the sprayer and the electrostatic adsorption effect and comfortable control. When using the air gun for spraying, be sure to turn on the air gun motor before starting the water pump for spraying; when turning off the air gun, you should first cut off the power of the water pump and then cut off the power of the air gun, so as to prevent moisture caused by the inside of the air gun. The damage of the motor and the deterioration of the electrostatic adsorption effect and the occurrence of high voltage leakage. Never use liquids that are corrosive to plastics and metals to avoid damaging important parts such as the storage tank, water pump, and nozzle. This machine cannot use wettable powder.

Electrostatic sprayer refers to a sprayer that can cause the sprayed droplets to produce a significant electrostatic entrapment adsorption effect on the target. ULV010 air-sending multifunctional electric electrostatic sprayer is a kind of electric sprayer with static electricity on the back of the backpack. The sprayer integrates many advantages such as electric spray, low-volume spray, air-blast spray and electrostatic spray. A series of advantages such as cost reduction are ideal high-efficiency plant protection and killing instruments in the field of plant diseases and insect pests prevention and control, sanitation and epidemic prevention and disinfection and insecticide in modern rural areas.

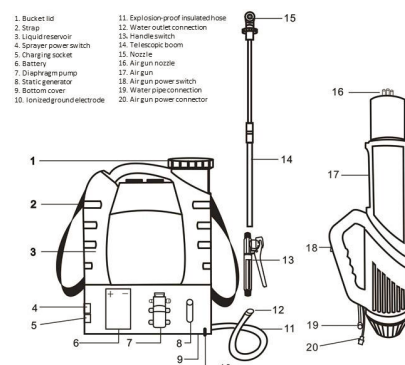
## Description of safety warning signs



Protective coverall, Protective masks, Long Gloves, Cleaning

## Content

- 1) Safety and Operation Precautions
- 2) Working Principle
- 3) Scope of Application
- 4) Technical Parameters
- 5) How to Use
- 6) Product Structure
- 7) Packing list



## 1) Safety and Operation Precautions

1. Must pay great attention to the filtration of chemical liquid and water to ensure there is no solid particle, so as not to block the nozzle and affect the operation. If the nozzle is blocked, stop the machine, remove the particulate matter and the machine can be turned on again.
2. The operator must understand the performance and protective methods of the used chemicals to avoid poisoning accidents caused by direct body contact with the chemical. Avoid spraying with chemicals that have a corrosive effect on plastics and metals. Please do not spray wettable powder to avoid damage to the pump and nozzle clogging.
3. After the machine is used, the interior of the storage tank and the spray system should be cleaned with water and wiped clean, and then placed in a suitable place in the room for proper storage. Cleaning method: After spraying the liquid medicine, pour clean water into the storage tank, and spray it for 15 seconds after starting up, pour out the remaining clean water and wipe it clean.
4. It is forbidden to immerse the spray head and the fuselage in water to prevent the motor, battery and electronic components from being damaged by moisture. It is forbidden to use the machine in a flammable and explosive environment.
5. During operation, pay attention to keep the outer surface and handle of the barrel in a clean and dry state. It is forbidden to make limb contact with other people during the operation, and it is forbidden to touch the boom and the charging socket of the barrel during the operation.
6. Please note that if an alarm sounds in the machine (lead-acid battery), it should be charged in time. After charging, please leave it for 10 minutes before use. When the battery is not used for a long time, the battery should be maintained and charged no less than once a month. Correct use and maintenance of the battery can greatly extend the service life of the battery.
7. There are tens of thousands of volts in the machine, it is strictly prohibited to disassemble the machine by yourself.
8. The use of special working fluids such as strong acids and bases is prohibited.
9. When using pesticides, follow the safety instructions provided by pesticide manufacturers.
10. Due to the high humidity and water vapor in the greenhouse, please do not store the machine in the greenhouse to avoid dampening the electrical circuits in the machine, affecting the electrostatic adsorption effect of the spray and generating electrostatic leakage.

## 2) Working Principle

This machine uses a 12V lead-acid battery or a lithium battery as a power source. The high-voltage electrostatic generator charges the liquid electrolyte with one polarity of static charge. At the same time, the target is charged with another polarity of static charge through technical means. After being pressurized by the diaphragm pump, the medicinal liquid with a polar static charge is directly squeezed out from the small nozzle hole, or the mist droplets are sent to the distance through the air gun. The sprayed fine droplets with one kind of polar static charge, under the combined action of external force and electrostatic force, directly run to the positive and negative sides of the crop (target) with another kind of polar static charge and are stalked by the crop. The leaf of the plant will firmly absorb, so as to achieve the purpose of efficient disinfection, insecticide and sterilization.

## 3) Scope of Application

This machine is suitable for the control of diseases and insect pests of low and sparse crops and various agricultural and forest crops such as tea, tobacco, flowers, fruit trees and other crops (especially suitable for greenhouse crops). It can be used for spraying insecticides, fungicides, herbicides, plant hormones, foliar fertilizers, etc., and can also be used for sanitation and epidemic prevention and disinfection of environments such as factories, warehouses, stations, docks, hotels, high-speed rails, airports, farms, and livestock. Sterilization and extermination, can easily spray all kinds of water, emulsion and soluble powder. After spraying soluble powder, the pump and nozzle should be cleaned in time.

## 4) Technical Parameters

<b>Dimensions mm</b>	380×190×540	<b>Working speed</b>	3000-15000m <sup>2</sup> /hour
<b>Net weight kg (With battery)</b>	5.6 (Lead-acid batteries)	<b>Spray range</b>	~2.5m (Boom swing)
	4.1 (Lithium battery)		~6m (Air gun swing)
<b>Liquid capacity L</b>	16	<b>Working time after a full charge</b>	(Boom) ~6 hours (Blow gun) ~1.5hours
<b>Operating voltage V</b>	12	<b>Fog droplet median diameter</b>	40-90 um
<b>Working pressure MPa</b>	0.15-0.4	<b>Spray flow</b>	Hourly 4-12 liters
<b>Battery capacity</b>	12V 8-18aH	<b>Static generator output voltage</b>	15-30KV
<b>Charger input / Output voltage V</b>	AC110- 240 / DC12-14.8	<b>Air gun net weight</b>	1.5KG

## Air Gun Connection and Operating Instruction



1. When installing the fine mist 3 nozzle, please pay attention to properly tighten.



2. Install the nozzle protective cover.



3. Connect and tighten the inlet pipe of the air gun and the outlet pipe of the sprayer



4. Connect the power plug of the air gun to the power socket of the sprayer.



5. Turn on the power switch of the air gun first.



6. Turn on the power switch of the sprayer next.

### Note:

1. When using always turn on the power for the air gun first before turning on the power for the sprayer.
2. When turning off, always power off the sprayer first before powering off the air gun. Pay attention to the order of operations to avoid affecting the use effect
3. When spraying, you should follow the wind and avoid spraying against the wind to avoid affecting the effect and personal pollution.

# Handle Switch Connection and Operating Instruction



1. Connect and tighten one end of the handle switch to the outlet pipe of the sprayer.



2. Connect and tighten the boom to the handle switch.



3. Turn on the power switch of the sprayer.



4. When spraying, hold the handle and press the flow switch.



5. The power switch should be turned off after spraying



## 5) How to Use

1. Reference method for dispensing: Refer to the instructions of the pesticide packaging, subtract about 60% of the indicated amount of chemical, after fully dissolving in appropriate amount of water and filtering, pour inside the bucket, wipe off the water on the outside of the bucket, and close the lid tightly. Note the liquid added to the barrel must be fully filtered, otherwise it will cause clogging of the nozzle and affect the normal spray operation and prevention and control effect. The specific dosage of medicine and water can also be adjusted according to the speed of each person and the height and density of the crops. Some should also be determined by the relevant technical personnel. When handling pesticides, follow the safety instructions provided by the pesticide manufacturer.

2. Operation sequence: Tighten the lid of the bucket after dispensing, carry the storage bucket on operator's back, hold the handle of the spray rod, and then turn on the main switch of the base of the bucket to spray the nozzle towards the crop. When the air gun is sprayed, the air gun switch should be turned on first, and then the barrel base switch. After spraying, the base switch of the barrel should be turned off first, and then the air gun switch should be turned off.

3. Spraying method: when spraying, start from the upper wind head of the field, so that the spray head is in front of the side of the lower wind head of the human body, so that the pesticide is sprayed while walking forward along the wind direction, so that the sprayed fine mist travel with the wind and falls and adsorbs on the crops to avoid contamination to the operator. When spraying, you can walk at a speed of more than one step per second. When spraying with the boom, the spray width (including swinging) is about 2.5 meters. For example, if you walk a distance of 300-400 meters every 10 minutes. When air-blast spray is used, the efficiency is higher. The height of the nozzle from the crop can be adjusted between 0.2 m and 0.5 m to avoid re-spray and miss-spray. It is forbidden to spray crops repeatedly to avoid over-medication of crops.

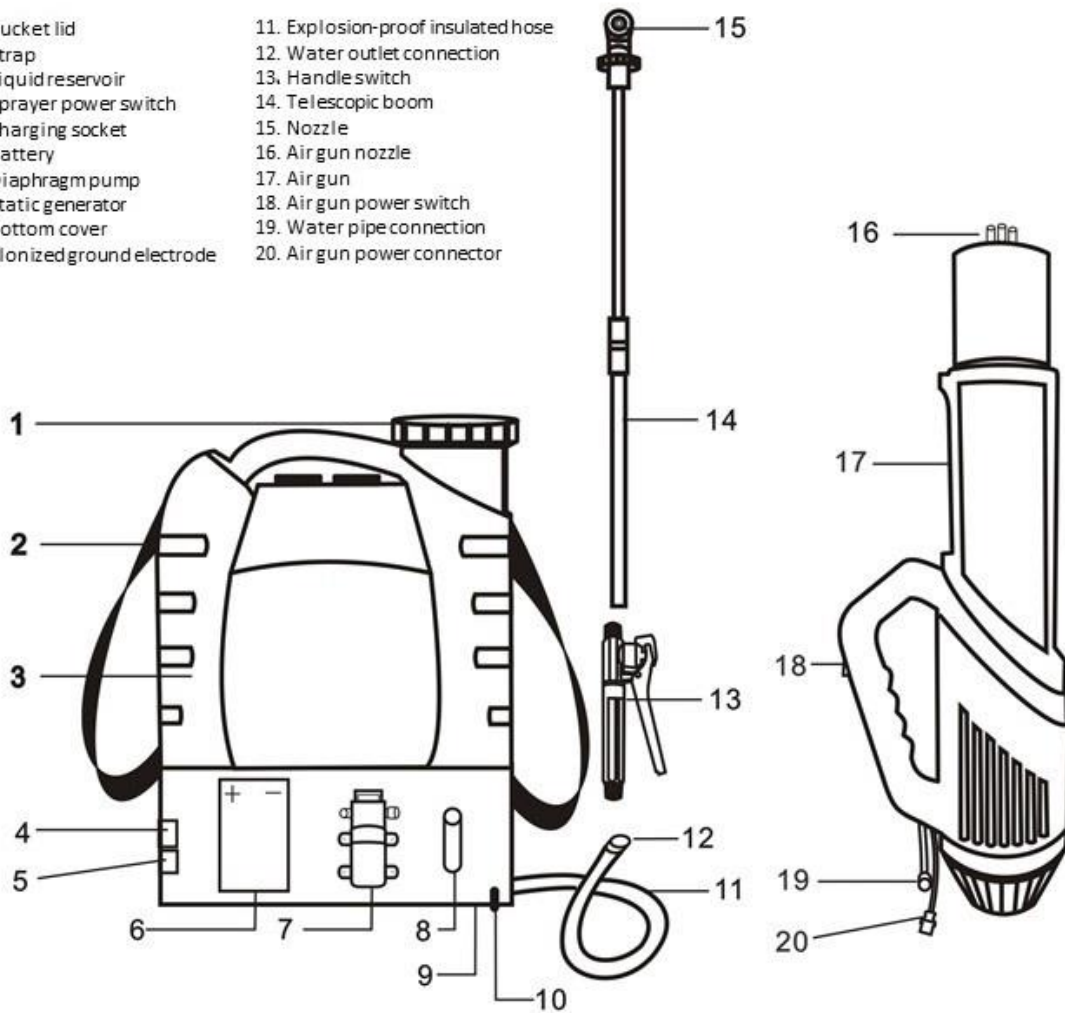
4. Grounding device: In order to strengthen the electrostatic adsorption effect of the spray, the machine is equipped with an ionized air grounding electrode on the body. During operation, the charge is conducted by air ionization to enhance the electrostatic adsorption effect.

5. Spraying time: During the hot summer season, the effect of spraying before 11 am and after 2 pm is better (the greenhouse operation is not limited to this). However, in windy weather, the direction and range of the fog may be difficult to control due to the influence of the wind. Therefore, it is not suitable for use. It is not suitable for use in rain and snow and thick fog. The ambient temperature of this machine is above 0°C to below 40°C.

## 6) Product Structure

1. Bucket lid
2. Strap
3. Liquid reservoir
4. Sprayer power switch
5. Charging socket
6. Battery
7. Diaphragm pump
8. Static generator
9. Bottom cover
10. Ionized ground electrode

11. Explosion-proof insulated hose
12. Water outlet connection
13. Handle switch
14. Telescopic boom
15. Nozzle
16. Air gun nozzle
17. Air gun
18. Air gun power switch
19. Water pipe connection
20. Air gun power connector



Schematic diagram of air-sending multifunctional electrostatic sprayer

## Packing List

No.	Description	Quantity	Remark
1	Sprayer main unit	1	
2	Charger	1	
3	User manual	1	
4	Single nozzle (with hood)	1	Electrostatic spray
5	Double nozzle	1	Electrostatic spray
6	Boom O-ring	2	
7	Nozzle sealing flat washer	2	
8	Telescopic boom	1	
9	Adjustable nozzle	1	
10	Air gun	1	
11	Fine mist 3 nozzle	1	Use with air gun