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 **SS-003.**  **The dangerous situation of ULV (ultra low volume) & mist blower devices used in space spray applications in our country Turkey**

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Aim, Methods and Findings: One of the methods of controlling adult mosquitoes is “space spray applications”. This method is widely used by municipalities in Turkey. This fieldwork have been running for 4 years (by using hot wire anemometer technic) to detect the performances of these devices and the droplet characteristics of the spray that they produce. This is the first and the only fieldwork which is being done in our country. Standards of World Health Organization and Environmental Protection Agency are used along with US Army Biology and Vector Control Unit methods. It is also compatible with the procedures of WHOPES 2010/9. 92 ULV (ultra low volume) applicators/cold foggers and 67 mist blower devices with 5 different brands and models have been tested with 424 tests. 171 separate tests results of mist blowers gave us average droplet sizes in; VMD50 = 108,98 micron, VMD90 = 172,93 micron and VMD10 =52,94 micron meter. Result: It is clearly understood that the devices which claimed to be “appropriate for the ULV applications against adult mosquitoes” are producing very big droplets that fall down quickly. Because this reason, they are not suitable! It is seen during the tests that, some problems arise like back pressure, heating, discharge below standards happen when we tried to reach a droplet size about VMD50 = 25 micron meter. To spray insecticides with these devices to people and to other non-target organisms excess amount of toxic material and causing phytotoxic effects on some plants as well as facing difficulties in controlling the target vector. These applicators should be suitable for their own usage purposes and they should be technically capable of WHO criteria. Maintenance and calibrations of these devices should be done on regular basis and must be inspected by the health authority.

**Keywords:** calibration, droplet, mist blower, space spray, ULV

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