Detection of and Protection from Extreme VOC "Spikes" Generated during Everyday Cooking, Cleaning, and Artistic Activities

Sonam Devabhaktuni, Aptos Middle School

Sathyaraj Devabhaktuni, Aptos Middle School

Devabhaktuni Srikrishna, Patient Knowhow, Inc.

Contact: sri@patientknowhow.com

M10 (1) M10 (2)

5.0

3.23

0.01

0.33

0.01

0.01

0.01

0.01

0.01

0.01

0.01

Peak readings of VOC meters by source:

5.0

2.8

0.01

0.42

0.01

0.01

0.01

0.01

0.01

0.01

0.01

Setup:

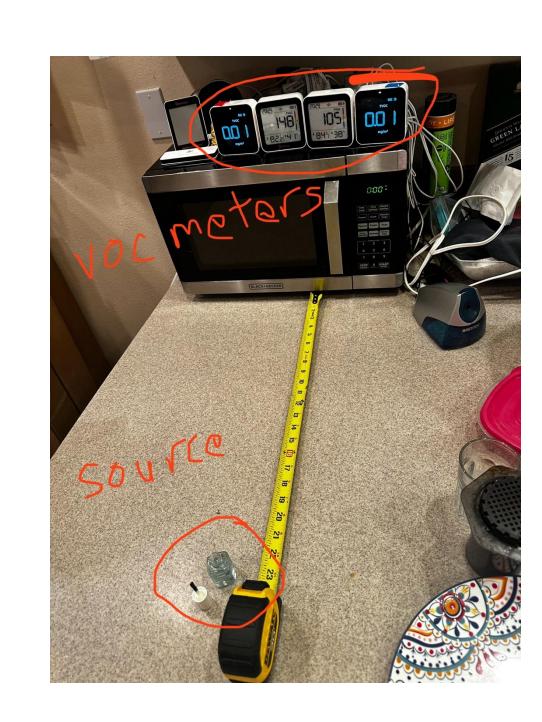
Sources of volatile organic compounds were placed 2 feet away from four low-cost VOC meters:

- two Temtop M10
- two Temtop M10+ (newer model)

Then peak readings were recorded. Room was allowed to return to baseline readings after each source was tested.

Room size: ~3000 cubic feet Ventilation:

- A Lasko Fan (speed 1) running in window
- Range hood: on







Source

(Titos)

Fiber)

Lysol on paper napkin

Vodka poured on plate

Clear nail polish

(Orowheat Double

Chilled vodka in shot

Toasted Bread

glass (Titos)

Hair Mousse

(Tresemme)

(Straus)

Baseline

Marker (Sharpie)

Peanut Butter (Skippy)

Chocolate Ice Cream

Sunscreen (Sunbum)















M10+ (1) M10+ (2)

498

477

420

166

69

56

44

29

20

19

20

498

471

419

143

59

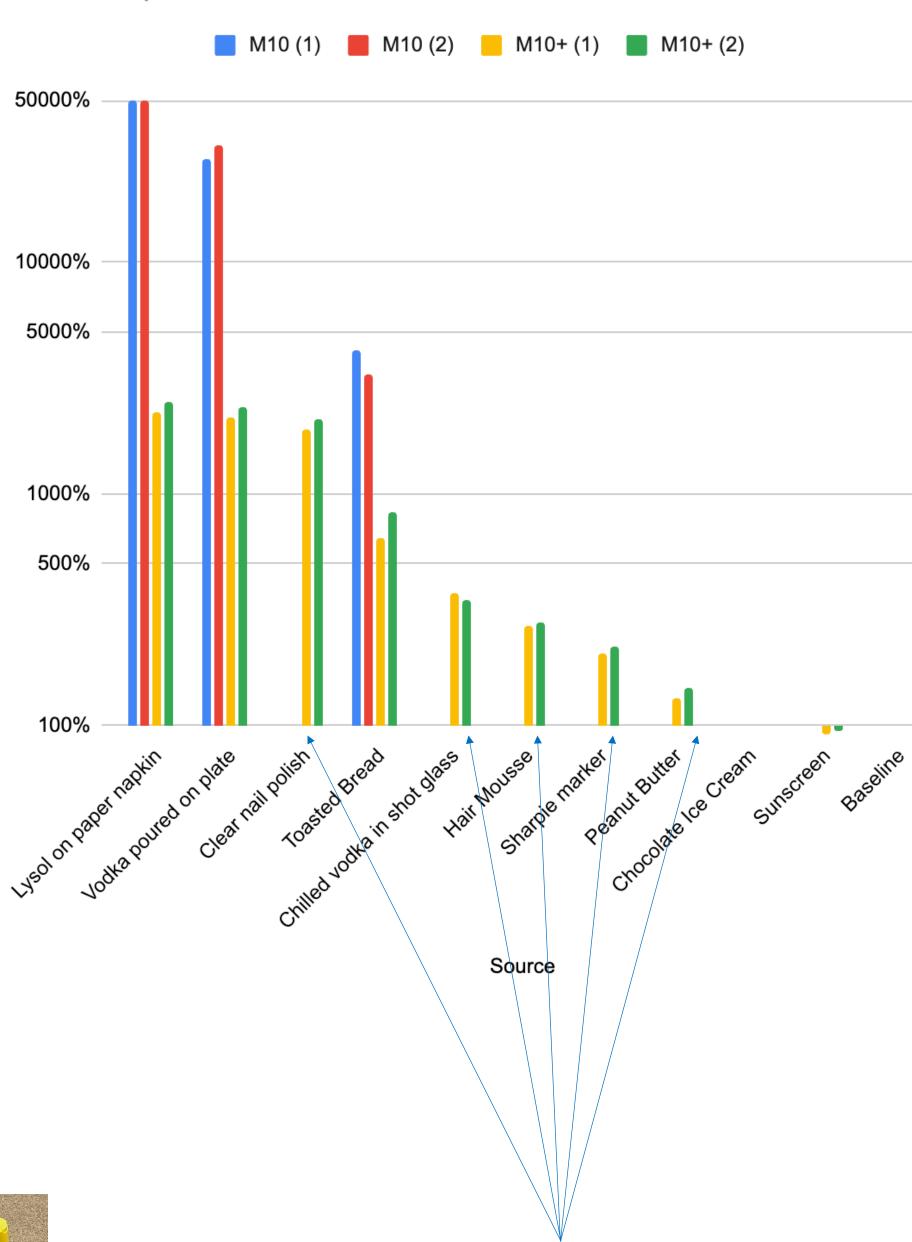
45

22

22



Peak readings of VOC meters by source (relative to baseline)



False Negatives with

M10 (vs M10+)