

## SUPPLEMENTAL TABLES

**Supplemental Table 1. Short-term effects of cleaning-related exposures on FEV1 and PEF among 21 professional female cleaners stratified by atopy (n=312 person-days).**

	Nocturnal				Morning following exposure			
	Atopics		Non atopics		Atopics		Non atopics	
	FEV <sub>1</sub> (mL)	PEF (L/min)	FEV <sub>1</sub> (mL)	PEF (L/min)	FEV <sub>1</sub> (mL)	PEF (L/min)	FEV <sub>1</sub> (mL)	PEF (L/min)
<b>Products</b>								
<b>No use of any product</b>	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Bleach	34.9 (-126.5-196.2)	-0.1 (-31.9-31.7)	-191.8 (-393.3-9.7)	-28.6 (-66.1-8.9)	120.0 (-55.5-295.5)	-8.0 (-45.8-29.8)	<b>-263.0 (-469.8--56.2)</b>	-20.7 (-61.3-19.9)
Ammonia	149.6 (-140.8-440.1)	8.9 (-59.8-77.6)	<b>-864.8 (-1310.9--418.6)</b>	-12.4 (-158.6-133.8)	10.2 (-326.5-346.9)	-58.7 (-142.5-25.2)	<b>-1163.5 (-1675.0--652.0)</b>	-133.9 (-304.7-36.9)
Multi-use product	180.7 (-8.0-369.5)	8.4 (-32.8-49.6)	5.6 (-146.3-157.5)	-10.5 (-46.0-25.0)	259.2 (50.5-467.8)	-20.0 (-63.6-23.6)	<b>-189.2 (-358.3--20.2)</b>	-33.5 (-72.4-5.5)
Hydrochloric acid	--	--	<b>-749.8 (-1002.3--497.3)</b>	30.4 (-20.7-81.5)	973.4 (338.8-1608.0)	86.0 (-73.2-245.3)	<b>-728.0 (-1053.0--403.0)</b>	<b>93.4 (29.1-157.7)</b>
Glass cleaner	139.4 (-59.3-338.0)	-0.5 (-45.3-44.3)	-29.7 (-219.6-160.3)	-12.9 (-53.0-27.2)	130.3 (-94.0-354.6)	-46.6 (-93.6-0.4)	<b>-177.4 (-327.4--27.5)</b>	-7.0 (-48.9-35.0)
Wax/polishes	<b>-260.0 (-500.1--20.0)</b>	-38.7 (-103.9-26.6)	-281.7 (-618.3-54.8)	79.1 (-31.9-190.0)	44.9 (-307.0-396.8)	-3.7 (-86.8-79.5)	-355.6 (-734.6-23.3)	-95.0 (-223.0-32.9)
Dust mop product	<b>-183.2 (-364.6--1.8)</b>	-18.3 (-68.0-31.3)	-57.4 (-236.5-121.7)	-18.5 (-68.0-31.0)	-160.7 (-468.1-146.7)	<b>-91.5 (-166.8--16.2)</b>	<b>-170.0 (-303.6--36.4)</b>	-46.0 (-93.2-1.2)
Carpet cleaner	--	--	-290.8 (-617.5-35.9)	-27.5 (-135.2-80.2)	--	--	-224.2 (-559.6-111.1)	-28.5 (-141.7-84.8)
Degreaser	65.1 (-193.6-323.9)	-3.1 (-53.0-46.8)	-286.4 (-504.5--68.2)	<b>-40.1 (-78.8--1.4)</b>	397.1 (121.7-672.4)	24.6 (-44.8-94.0)	<b>-519.0 (-672.6--365.5)</b>	-24.0 (-76.1-28.2)
Solvent	-322.3 (-665.9-21.3)	-13.2 (-148.0-121.6)	<b>-895.0 (-1190.9--599.1)</b>	<b>-112.9 (-206.0--19.7)</b>	<b>-956.0 (-1512.6--399.4)</b>	<b>-235.7 (-401.8--69.5)</b>	<b>-1281.9 (-1624.5--939.4)</b>	<b>-163.4 (-274.5--52.3)</b>
Powder soap/detergent	27.7 (-284.5-339.9)	10.4 (-73.4-94.2)	-288.1 (-498.1--78.1)	-9.0 (-70.4-52.4)	-137.1 (-554.5-280.2)	<b>-101.7 (-202.1--1.3)</b>	<b>-514.8 (-781.3--248.4)</b>	-4.6 (-86.1-76.8)
Liquid soap/detergent	-117.4 (-262.6-27.8)	-18.7 (-50.2-12.8)	-53.0 (-232.5-126.5)	-2.6 (-43.1-37.8)	-113.0 (-324.6-98.7)	-12.2 (-57.8-33.4)	<b>-183.9 (-366.2--1.5)</b>	-15.6 (-56.5-25.2)
Limescale remover	84.6 (-164.7-333.9)	-23.1 (-80.6-34.3)	-225.4 (-424.4--26.4)	18.4 (-37.9-74.8)	163.5 (-110.0-437.0)	-42.7 (-107.1-21.6)	-197.9 (-453.1-57.2)	-25.9 (-85.5-33.7)
Air freshener	42.9 (-176.7-262.6)	-23.4 (-73.9-27.0)	-166.2 (-378.1-45.8)	-3.8 (-46.1-38.5)	19.6 (-222.2-261.5)	-47.9 (-105.3-9.6)	<b>-417.7 (-620.0--215.5)</b>	-19.0 (-66.5-28.5)
Any irritant	34.9 (-126.5-196.2)	-0.1 (-31.9-31.7)	-191.8 (-390.8-7.3)	-28.9 (-66.0-8.1)	120.0 (-55.5-295.5)	-8.0 (-45.8-29.8)	<b>-265.0 (-469.5--60.5)</b>	-21.1 (-61.4-19.3)
Number of different products**								
1-3	96.8 (-92.2-285.8)	7.3 (-30.1-44.6)	-189.0 (-384.1-6.1)	-34.1 (-71.7-3.5)	<b>208.7 (21.8-395.6)</b>	-2.4 (-41.3-36.5)	-208.0 (-409.2--6.8)	-19.6 (-58.0-18.7)
≥4	-41.3 (-262.6-179.9)	-10.2 (-53.6-33.2)	-129.6 (-313.2-54.1)	-13.6 (-49.1-22.0)	79.0 (-139.7-297.8)	-45.2 (-91.2-0.7)	-219.8 (-416.1--23.4)	-14.6 (-52.2-23.1)
Number of different sprays**								
1-2	-170.9 (-348.0-6.2)	-14.8 (-62.4-32.8)	-149.1 (-344.6-46.4)	-10.7 (-50.6-29.2)	--	--	--	--
≥3	<b>-232.0 (-393.1--70.8)</b>	-34.6 (-77.2-8.0)	-130.4 (-334.5-73.6)	-45.0 (-90.5-0.5)	-0.9 (-288.6-286.7)	-10.8 (-74.4-52.8)	-318.2 (-505.2--131.2)	-13.9 (-61.2-33.4)

Coefficients and 95% confidence intervals from linear regression mixed models adjusted by age, height, num. of cigarettes smoked, presence of flu or cold symptoms and respiratory medication. Random effect term by subject included in all models. \* Unit of analysis: 100 times the daily maximum minus daily minimum divided by daily mean. \*\* Reference: Zero.

## SUPPLEMENTAL TABLES

**Supplemental table 2. Short-term effects of cleaning-related exposures on diurnal variation of FEV1 and PEF among 21 professional female cleaners stratified by atopy (n=312 person-days).**

	Diurnal variation			
	Atopics		Non atopics	
	FEV <sub>1</sub> (mL)	PEF (L/min)	FEV <sub>1</sub> (mL)	PEF (L/min)
<b>Products</b>				
<b>No use of any product</b>	Ref.	Ref.	Ref.	Ref.
Bleach	2.4 (-3.3-8.1)	3.9 (-4.7-12.5)	1.0 (-4.5-6.4)	-3.8 (-12.2-4.6)
Ammonia	<b>11.4 (1.5-21.3)</b>	<b>23.0 (8.2-37.8)</b>	0.5 (-23.5-24.5)	4.8 (-36.5-46.1)
Multi-use product	7.3 (-0.3-15.0)	<b>11.5 (0.4-22.6)</b>	2.4 (-4.5-9.3)	-2.8 (-13.6-7.9)
Hydrochloric acid	7.8 (-10.3-25.9)	<b>28.9 (0.2-57.6)</b>	2.5 (-5.1-10.2)	1.0 (-12.3-14.3)
Glass cleaner	7.1 (-0.2-14.3)	<b>13.2 (2.1-24.3)</b>	3.4 (-3.6-10.4)	-8.4 (-18.4-1.6)
Wax/polishes	11.4 (-0.1-23.0)	10.3 (-6.6-27.3)	-8.9 (-22.3-4.5)	-20.2 (-43.6-3.3)
Dust mop product	-0.9 (-8.7-6.9)	-2.1 (-14.6-10.4)	3.8 (-4.1-11.7)	5.5 (-7.4-18.4)
Carpet cleaner	--	--	4.0 (-12.5-20.5)	2.0 (-27.3-31.3)
Degreaser	5.5 (-2.8-13.8)	9.1 (-3.5-21.8)	-1.1 (-6.0-3.9)	-8.6 (-15.6--1.6)
Solvent	3.6 (-11.9-19.0)	<b>26.6 (2.1-51.1)</b>	-0.5 (-15.6-14.6)	7.8 (-18.9-34.5)
Powder soap/detergent	<b>22.3 (10.5-34.0)</b>	<b>40.7 (23.9-57.6)</b>	2.4 (-6.1-11.0)	-0.9 (-15.9-14.1)
Liquid soap/detergent	5.0 (-1.1-11.1)	6.8 (-2.1-15.8)	4.9 (-0.9-10.8)	2.0 (-7.1-11.1)
Limescale remover	<b>12.2 (3.1-21.3)</b>	<b>21.5 (7.8-35.3)</b>	-0.1 (-9.3-9.1)	-8.9 (-23.3-5.4)
Air freshener	<b>14.4 (7.0-21.9)</b>	<b>20.6 (8.7-32.5)</b>	2.4 (-3.6-8.5)	-0.6 (-10.8-9.7)
Any irritant	2.4 (-3.3-8.1)	3.9 (-4.7-12.5)	1.1 (-4.3-6.5)	-3.6 (-11.9-4.8)
Number of different products**				
1-3	5.3 (-3.3-14.0)	9.9 (-2.5-22.2)	-3.3 (-9.2-2.7)	-0.6 (-9.5-8.4)
≥4	<b>11.7 (2.7-20.8)</b>	12.5 (-0.5-25.4)	2.4 (-2.7-7.5)	-10.5 (-22.6-1.7)
Number of different sprays**				
1-2	-0.8 (-6.4-4.8)	-2.0 (-10.3-6.2)	1.0 (-4.3-6.4)	-6.5 (-15.7-2.8)
≥3	<b>10.7 (3.8-17.6)</b>	<b>17.2 (7.1-27.3)</b>	-3.5 (-10.7-3.7)	-2.5 (-10.4-5.5)

Coefficients and 95% confidence intervals from linear regression mixed models adjusted by age, height, num. of cigarettes smoked, presence of flu or cold symptoms and respiratory medication. Random effect term by subject included in all models. \* Unit of analysis: 100 times the daily maximum minus daily minimum divided by daily mean. \*\* Reference: Zero.