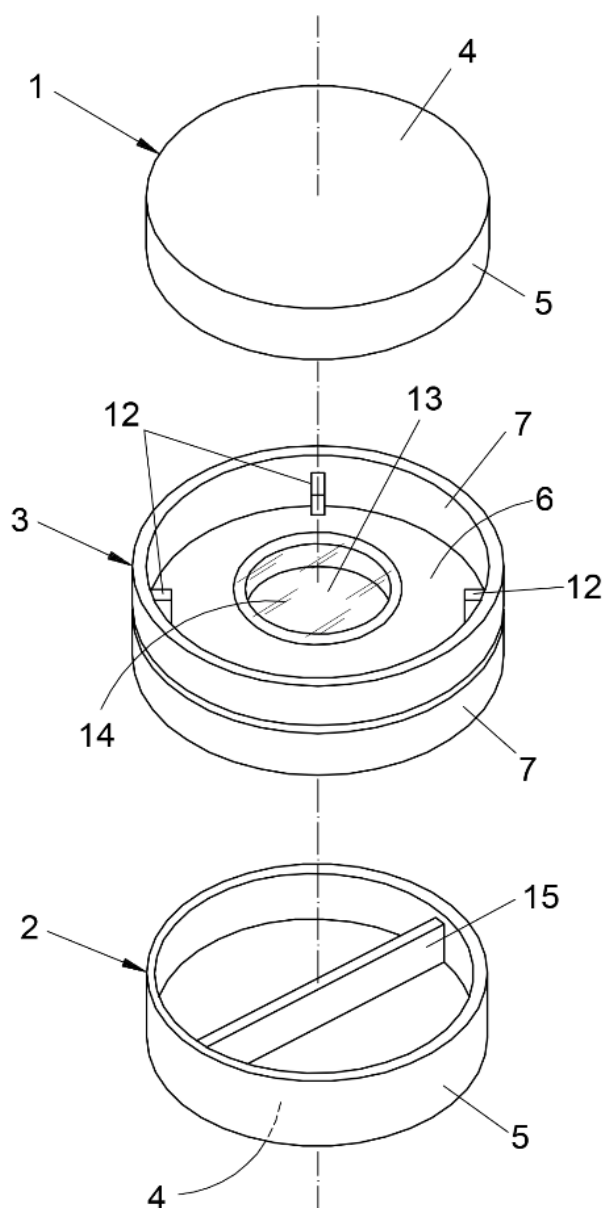
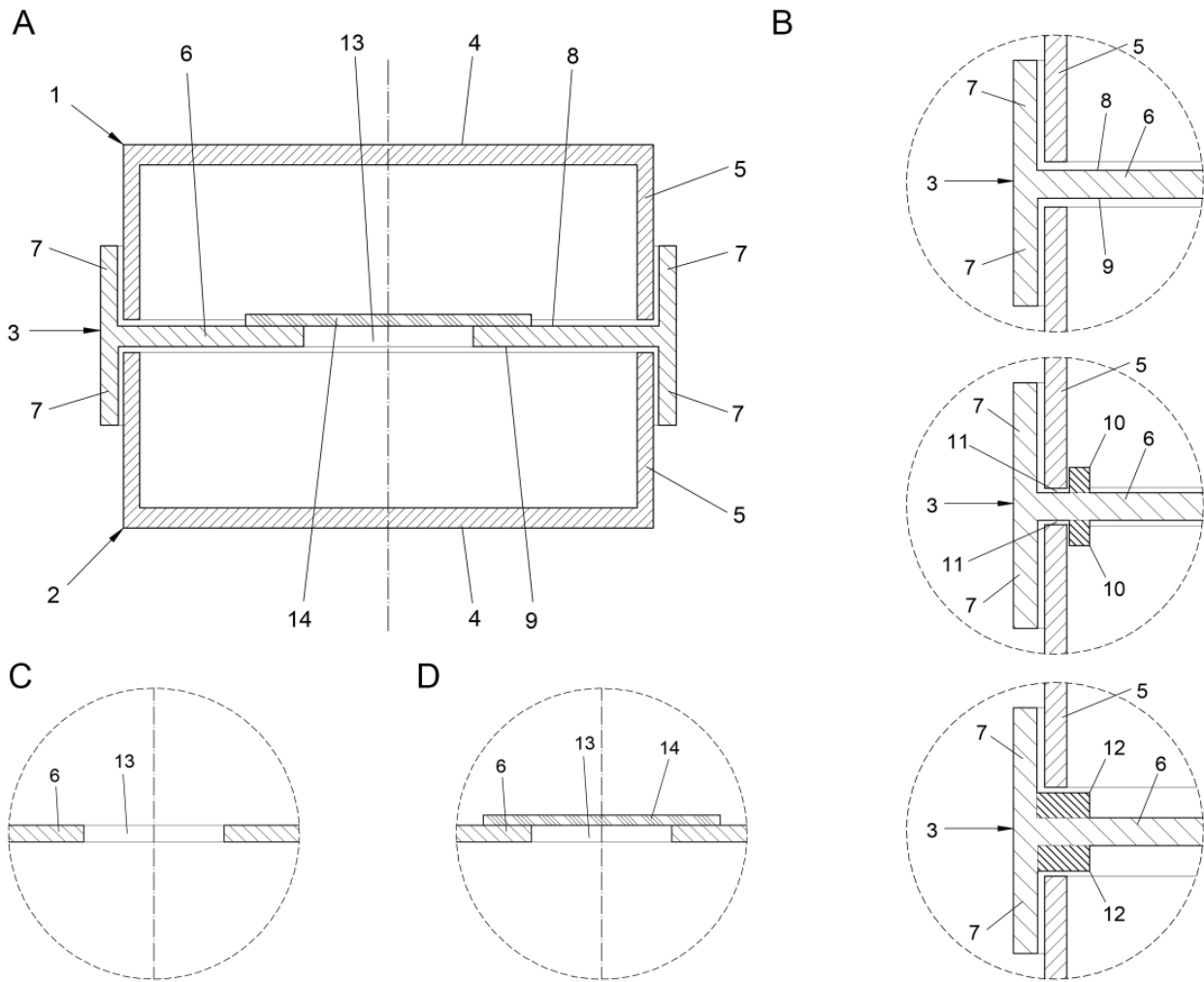


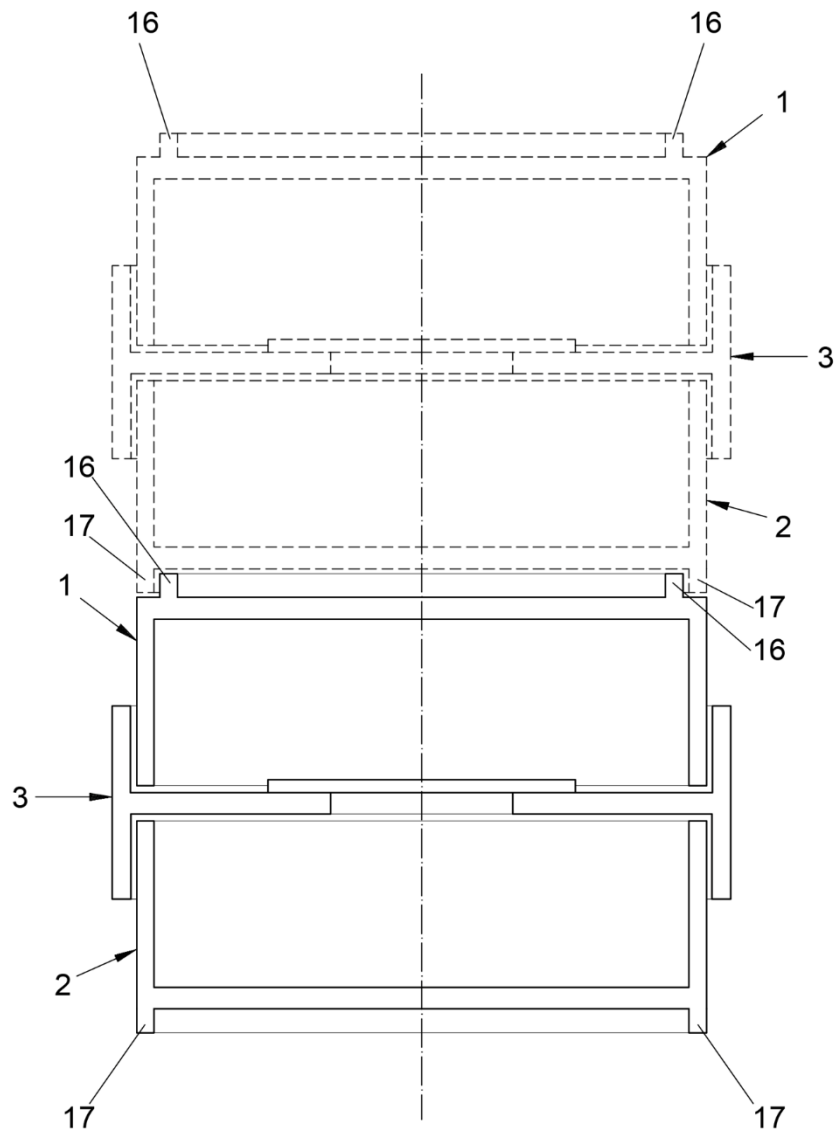
SUPPLEMENTARY MATERIALS



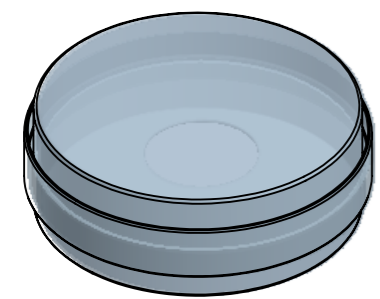
Supplementary Figure SF1. Explosive View. Vented VOC Chamber. 1: upper plate; 2: lower plate; 3: central piece; 4: upper and lower walls (plates); 5: perimeter wall (plates); 6: intermediate wall (central piece); 7: lateral walls (central piece); 8: upper face (not shown. See SF2); 9: lower face (not shown. See SF2); 10: internal edge (not shown. See SF2); 11: shelter (not shown. See SF2); 12: ventilation flanges; 13: central hole; 14: membrane or filter (optional. Not used in this study); 15: septum for divided Petri dishes (optional. Not used in this study).



Supplementary Figure SF2. (A) Frontal Cross-section. Non-Vented VOC Chamber. (B) Detail of union between plates and central piece in Non-Vented VOC Chambers (upper circle), Non-Vented VOC Chamber with locking system (central circle), Vented VOC Chamber with flanges (lower circle). (C) Detail of central hole without membrane or filter. (D) Detail of central hole with membrane or filter attached. 1: upper plate; 2: lower plate; 3: central piece; 4: upper and lower walls (plates); 5: perimeter wall (plates); 6: intermediate wall (central piece); 7: lateral walls (central piece); 8: upper face (central piece); 9: lower face (central piece); 10: internal edge (locking system. Optional. Not used in this study); 11: shelter (locking system. Optional. Not used in this study); 12: ventilation flanges; 13: central hole; 14: membrane or filter (optional. Not used in this study).

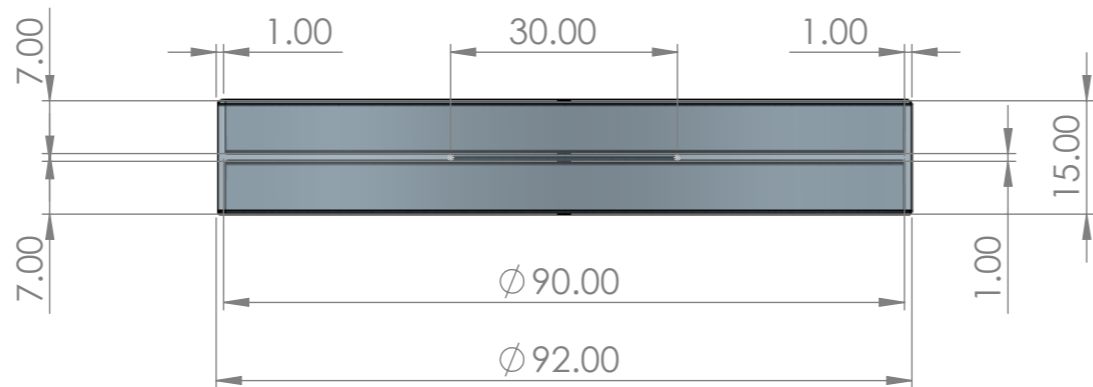


Supplementary Figure SF3. Frontal Cross-section of two Non-Vented VOC Chambers stacked. 1: upper plate; 2: lower plate; 3: central piece; 16: upper inner ring for stacking chambers (optional. Not used in this study); 17: lower outer ring for stacking chambers (optional. Not used in this study).



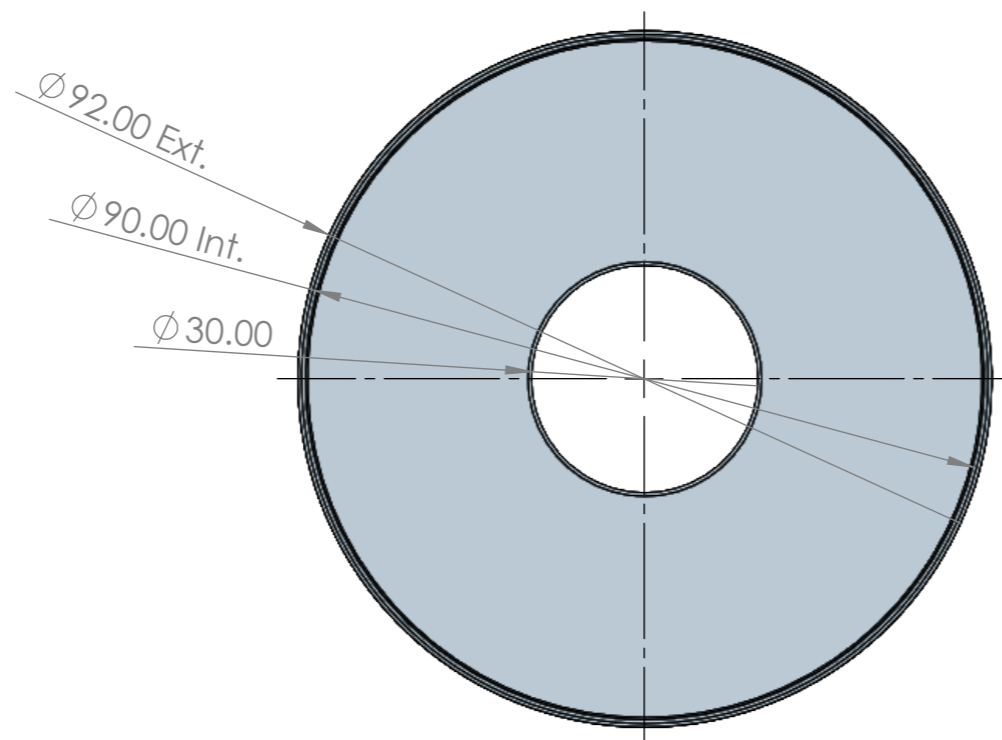
FULL CHAMBER

Scale:
1/2

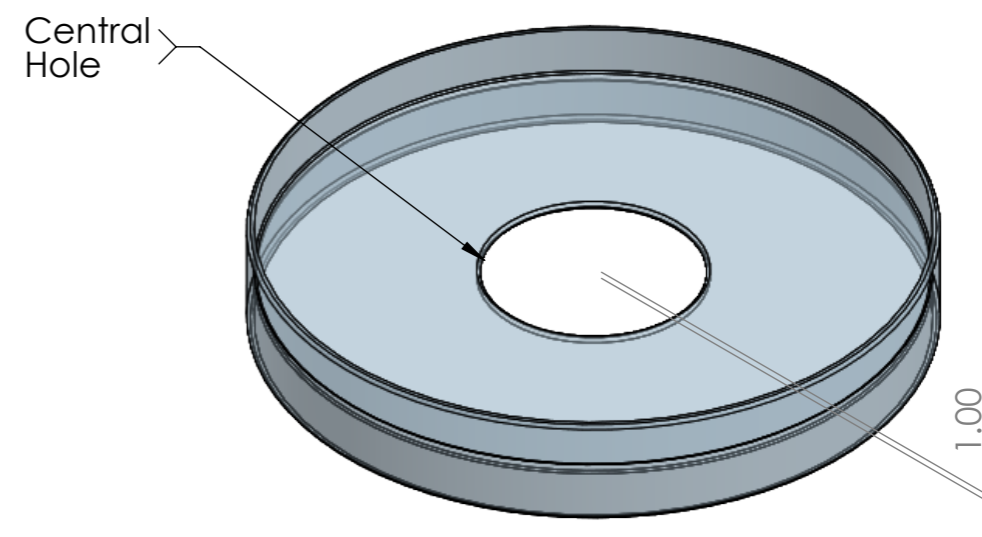


FRONT VIEW

**1 x Central piece
per full chamber**

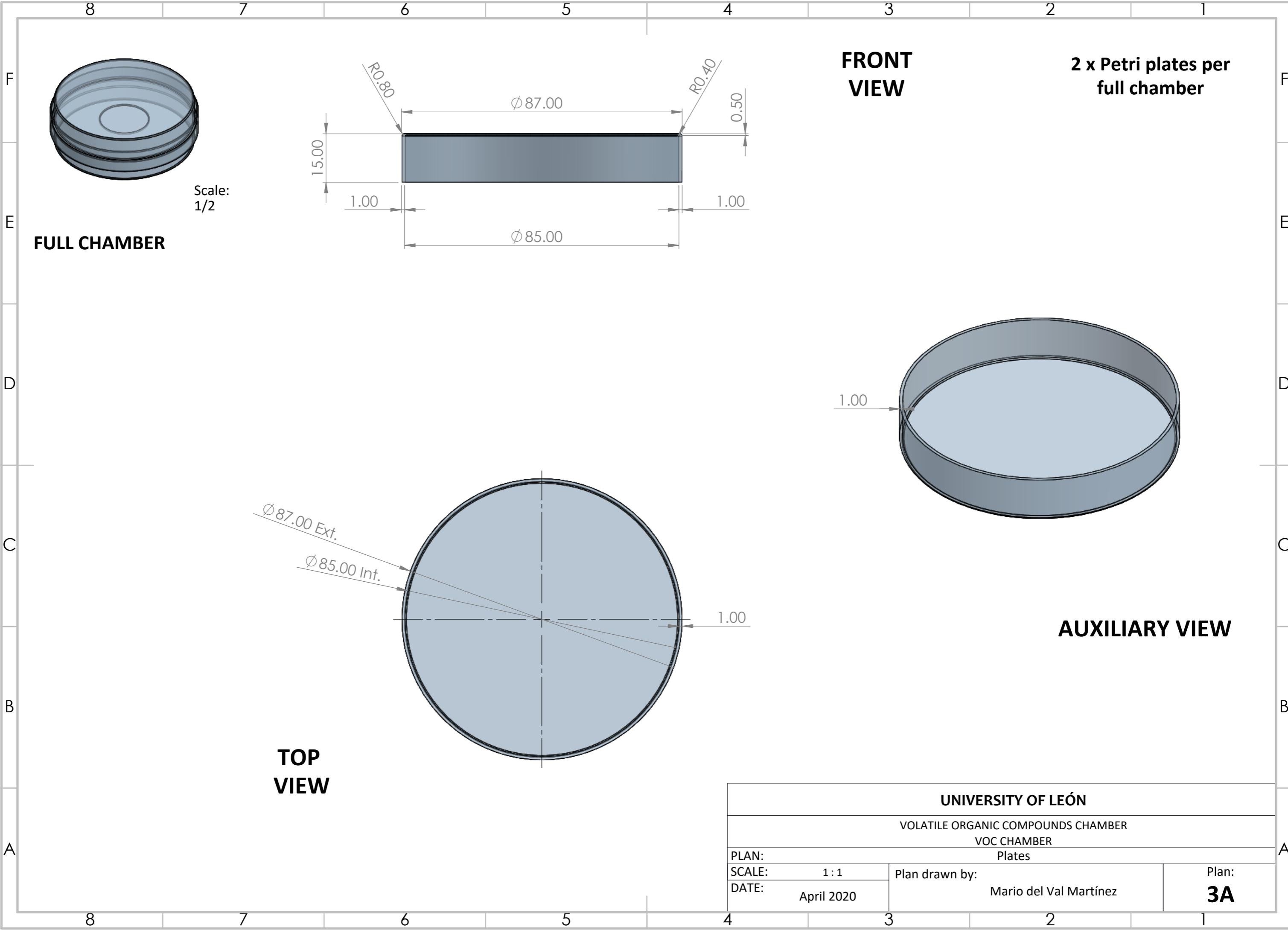


TOP VIEW



AUXILIARY VIEW

UNIVERSITY OF LEÓN			
VOLATILE ORGANIC COMPOUNDS CHAMBER VOC CHAMBER			
PLAN: Perforated central piece			
SCALE:	1 : 1	Plan drawn by:	Plan:
DATE:	April 2020	Mario del Val Martínez	2A

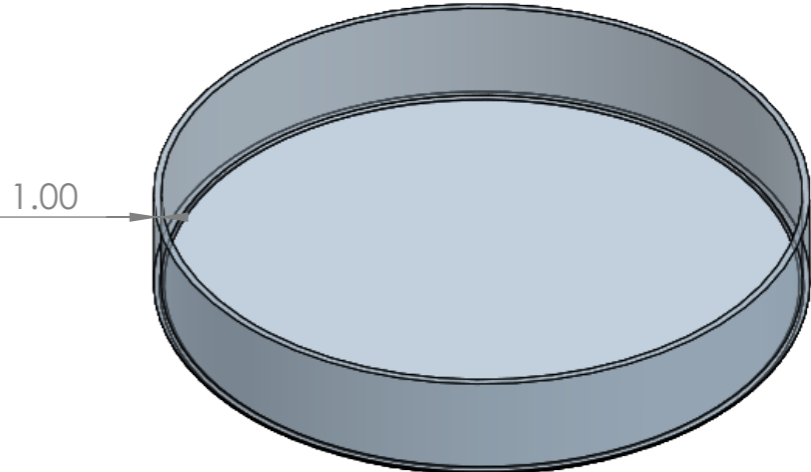


FULL CHAMBER

Scale:
1/2

**FRONT
VIEW**

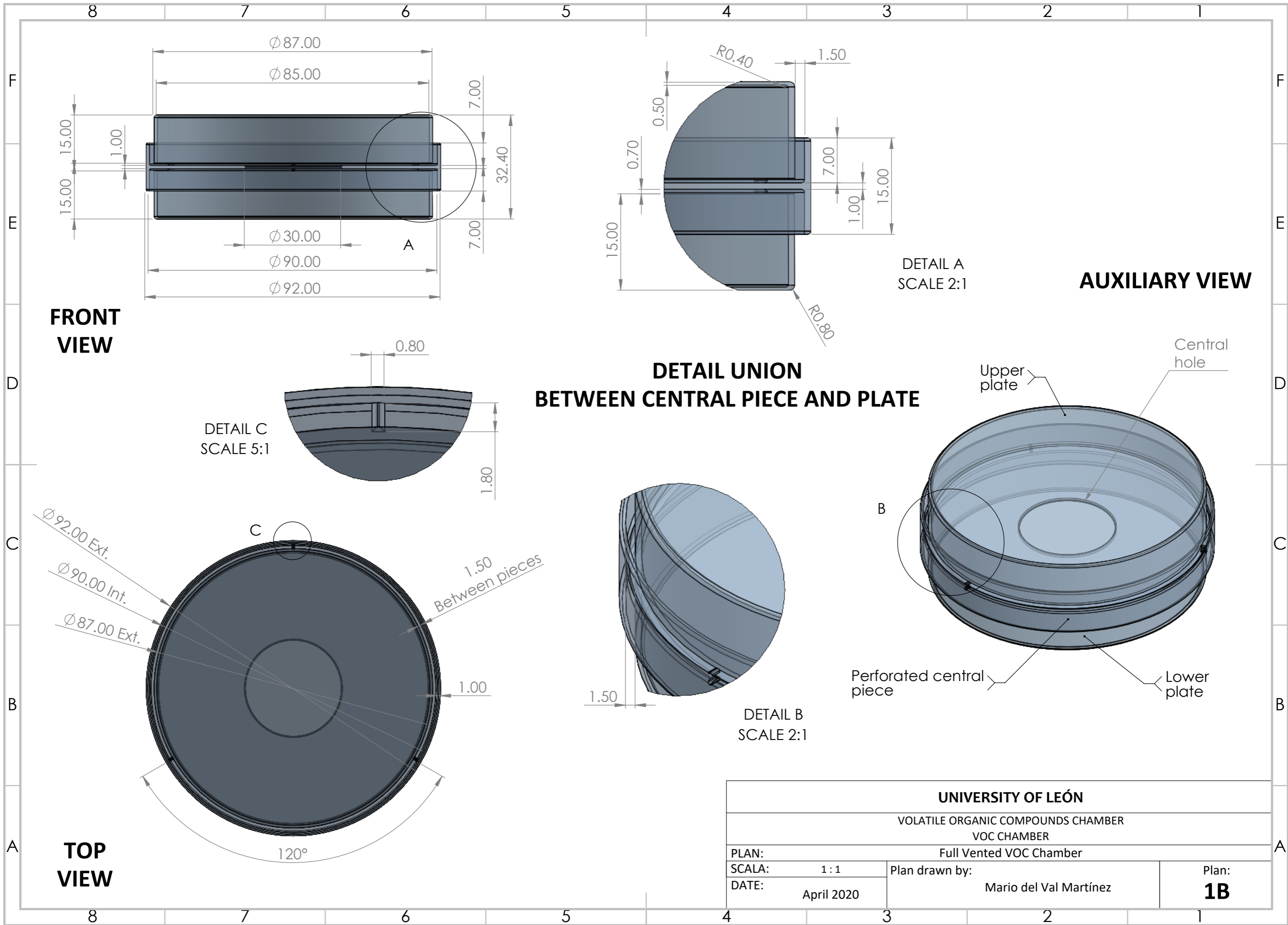
**2 x Petri plates per
full chamber**



AUXILIARY VIEW

**TOP
VIEW**

UNIVERSITY OF LEÓN			
VOLATILE ORGANIC COMPOUNDS CHAMBER			
VOC CHAMBER			
Plates			
PLAN:		Plan drawn by:	Plan:
SCALE:	1 : 1	Mario del Val Martínez	3A
DATE:	April 2020		



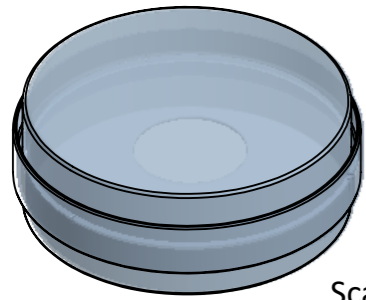
FRONT VIEW

AUXILIARY VIEW

DETAIL UNION BETWEEN CENTRAL PIECE AND PLATE

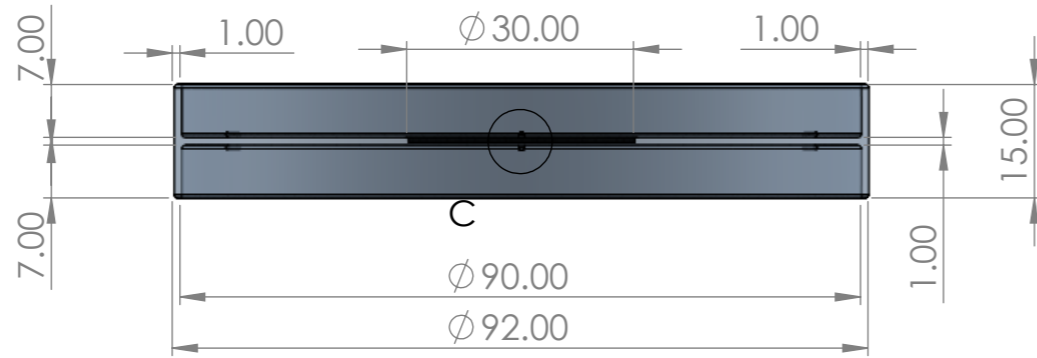
TOP VIEW

UNIVERSITY OF LEÓN			
VOLATILE ORGANIC COMPOUNDS CHAMBER VOC CHAMBER			
Full Vented VOC Chamber			
PLAN:			
SCALA:	1 : 1	Plan drawn by:	Plan:
DATE:	April 2020	Mario del Val Martínez	1B



Scale:
1/2

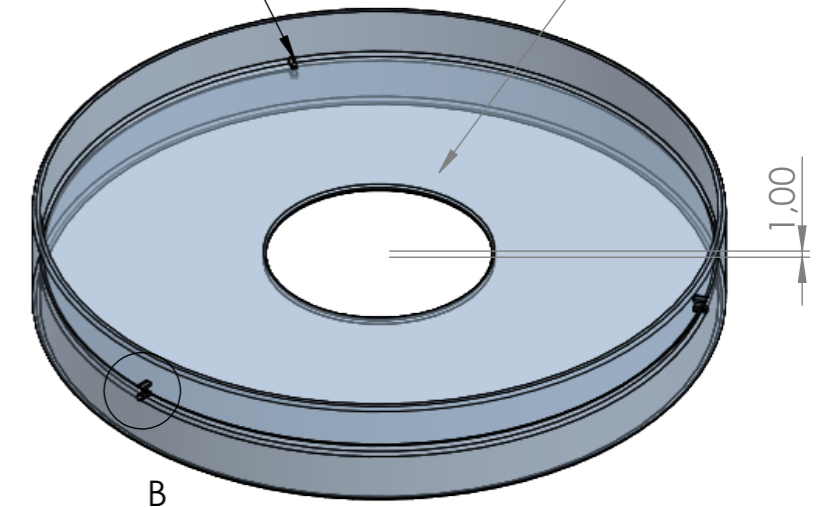
FULL CHAMBER



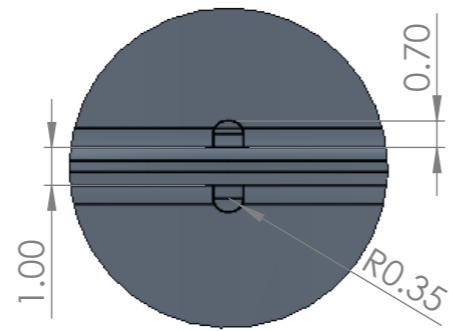
FRONT VIEW

1 x Central piece per full chamber

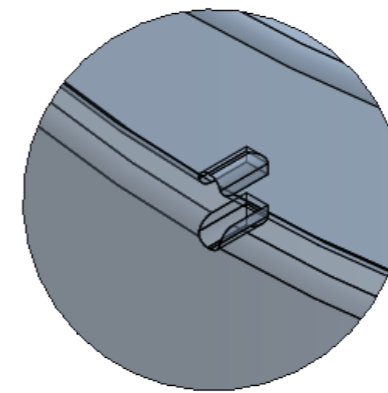
Holding flanges for ventilation Central Hole



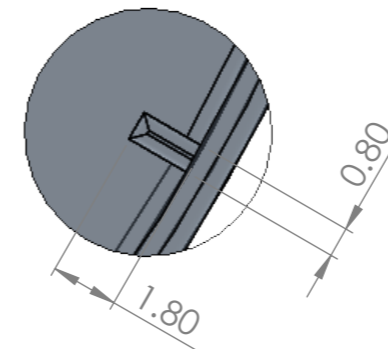
AUXILIARY VIEW



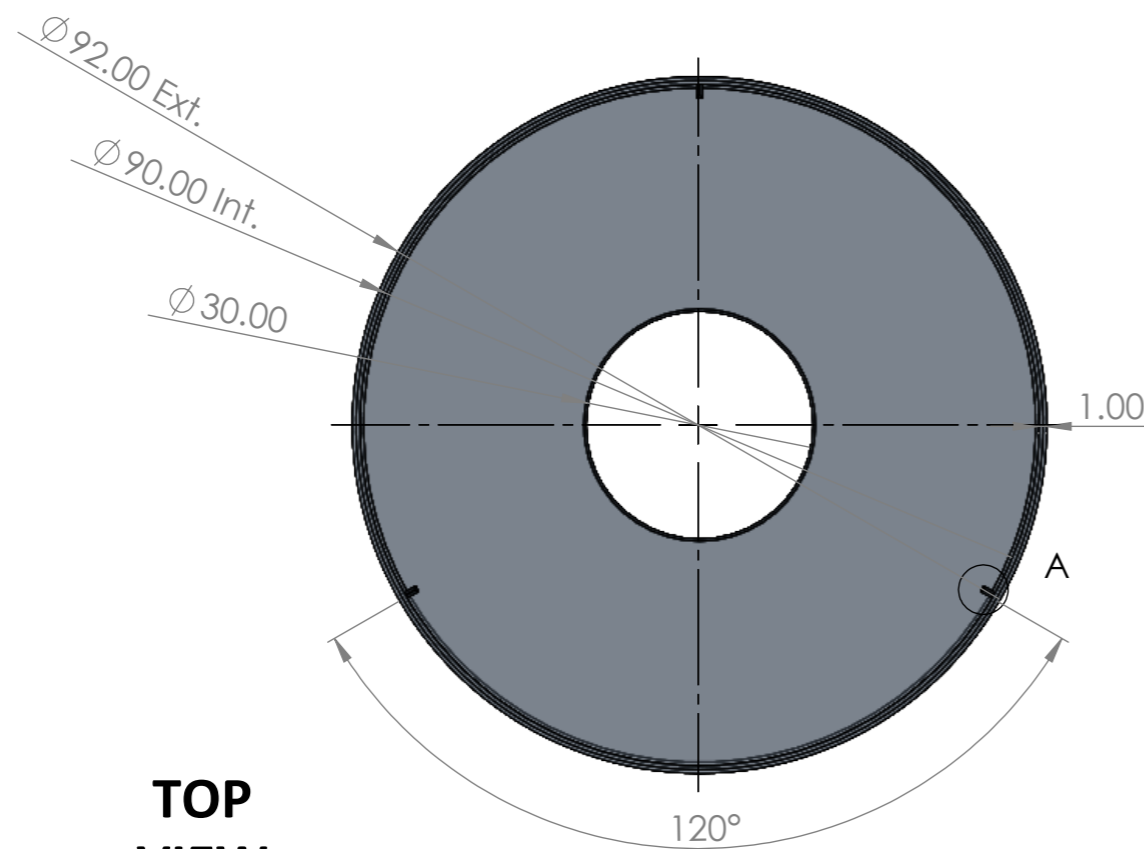
DETAIL C
SCALE 5:1



DETAIL B
SCALE 5:1



DETAIL A
SCALE 5:1



TOP VIEW

UNIVERSITY OF LEÓN			
VOLATILE ORGANIC COMPOUNDS CHAMBER			
VOC CHAMBER			
PLAN: Perforated central piece			
PLAN:	1 : 1	Plan drawn by:	Plan:
SCALA:	1 : 1	Mario del Val Martínez	2B
DATE:	April 2020		

Supplementary table ST1. Experiment 1. Growth (mm) and Percentage of inhibition (PI) of *R. solani* R43 confronted by *T. harzianum* T34, T34-5.27, E20 and E20-5.7 using DDS method (first row), Non-Vented VOC Chambers (second row), and Vented VOC Chambers (third row); after 1, 2, 3, and 4 days post-inoculation. PI was calculated in relation to the control using the following equation proposed by Gotor-Vila et al. (2017): $[(C-T) / C] \times 100$. Where C is the diameter of the controls and T that of the treatments. PI is expressed as the mean of the four replicates. P values were obtained from growth results using one-way analysis of variance (ANOVA), after confirmation of normality and equality of variances, and were contrasted using Tukey's *post hoc* test. Capital letters represent the differences between treatments with $P \leq 0.05$; $P \leq 0.01$; and $P \leq 0.001$, respectively. All statistical analyses were performed using SPSS 24.0 (IBM).

R43 EXPERIMENT 1		day 1						day 2						day 3						day 4					
		GROWTH (mm)		INHIBITION (%)	STATISTICS			GROWTH (mm)		INHIBITION (%)	STATISTICS			GROWTH (mm)		INHIBITION (%)	STATISTICS			GROWTH (mm)		INHIBITION (%)	STATISTICS		
Double Dish Set	TREATMENT	Mean	SD	Mean	P ≤ 0.05	P ≤ 0.01	P ≤ 0.001	Mean	SD	Mean	P ≤ 0.05	P ≤ 0.01	P ≤ 0.001	Mean	SD	Mean	P ≤ 0.05	P ≤ 0.01	P ≤ 0.001	Mean	SD	Mean	P ≤ 0.05	P ≤ 0.01	P ≤ 0.001
	CC	17.92	1.23	-	A	A	A	34.9167	4.11	-	A	A	A	45.50	3.19	-	A	A	A	54.58	2.63	-	A	A	A
	R43/T34	10.00	1.05	44.19	C	BC	BC	13.25	1.91	62.05	BC	B	B	15.00	2.94	67.03	B	B	B	16.00	3.47	70.69	B	B	B
	R43/T34-5.27	6.92	0.17	61.40	D	D	C	9.16667	1.35	73.75	D	B	B	10.58	2.04	76.74	B	B	B	12.25	3.41	77.56	B	B	B
	R43/E20	12.25	1.29	31.63	B	B	B	15.9167	3.98	54.42	B	B	B	17.58	5.03	61.36	B	B	B	18.42	5.82	66.26	B	B	B
	R43/E20-5.7	7.50	0.58	58.14	D	CD	C	11.5833	1.69	66.83	BC	B	B	14.75	2.32	67.58	B	B	B	17.08	2.91	68.70	B	B	B
Non-Vented VOC Chamber	TREATMENT	Mean	SD	Mean	P ≤ 0.05	P ≤ 0.01	P ≤ 0.001	Mean	SD	Mean	P ≤ 0.05	P ≤ 0.01	P ≤ 0.001	Mean	SD	Mean	P ≤ 0.05	P ≤ 0.01	P ≤ 0.001	Mean	SD	Mean	P ≤ 0.05	P ≤ 0.01	P ≤ 0.001
	CC	19.75	0.74	-	A	A	A	36.67	1.12	-	A	A	A	51.25	1.50	-	A	A	A	63.58	1.71	-	A	A	A
	R43/T34	13.42	0.32	32.07	C	B	B	19.75	0.32	46.14	C	C	BC	24.50	1.40	52.20	C	C	BC	33.00	3.32	48.10	BC	BC	BC
	R43/T34-5.27	8.08	0.32	59.07	D	C	C	13.75	1.03	62.50	D	D	D	19.67	1.31	61.63	D	D	C	28.00	2.19	55.96	CD	C	BC
	R43/E20	15.08	0.83	23.63	B	B	B	23.42	0.63	36.14	B	B	B	29.25	0.63	42.93	B	B	B	36.50	1.11	42.60	B	B	B
	R43/E20-5.7	9.08	0.63	54.01	D	C	C	15.83	0.58	56.82	D	D	CD	20.33	1.45	60.33	D	D	C	27.56	1.68	56.66	D	C	C
Vented VOC Chamber	TREATMENT	Mean	SD	Mean	P ≤ 0.05	P ≤ 0.01	P ≤ 0.001	Mean	SD	Mean	P ≤ 0.05	P ≤ 0.01	P ≤ 0.001	Mean	SD	Mean	P ≤ 0.05	P ≤ 0.01	P ≤ 0.001	Mean	SD	Mean	P ≤ 0.05	P ≤ 0.01	P ≤ 0.001
	CC	19.08	1.00	-	A	A	A	40.83	0.79	-	A	A	A	60.83	1.69	-	A	A	A	71.75	1.07	-	A	A	A
	R43/T34	19.00	0.98	0.44	A	A	A	38.50	3.49	5.71	A	A	A	53.08	7.05	12.74	A	A	A	63.08	2.57	12.08	B	B	B
	R43/T34-5.27	10.00	0.27	47.60	B	B	B	19.25	0.32	52.86	B	B	B	26.67	0.47	56.16	B	B	B	32.50	0.58	54.70	C	C	C
	R43/E20	19.67	1.31	-3.06	A	A	A	41.11	4.74	4.90	A	A	A	51.89	7.82	14.70	A	A	A	65.11	2.59	9.25	B	B	AB
	R43/E20-5.7	11.75	0.50	38.43	B	B	B	21.75	1.40	46.73	B	B	B	29.58	2.47	51.37	B	B	B	34.75	2.13	51.57	C	C	C

Supplementary table ST2. Experiment 2. Growth (mm) and Percentage of inhibition (PI) of *R. solani* R43 confronted by *T. harzianum* T34, T34-5.27, E20, and E20-5.7 using DDS method (first row), Non-Vented VOC Chambers (second row), and Vented VOC Chambers (third row); after 1, 2, 3, and 4 days post-inoculation. PI was calculated in relation to the control using the following equation proposed by Gotor-Vila et al. (2017): $[(C-T) / C] \times 100$. Where C is the diameter of the controls and T that of the treatments. PI is expressed as the mean of the four replicates. P values were obtained from growth results using one-way analysis of variance (ANOVA), after confirmation of normality and equality of variances, and were contrasted using Tukey's *post hoc* test. Capital letters represent the differences between treatments with $P \leq 0.05$; $P \leq 0.01$; and $P \leq 0.001$, respectively. All statistical analyses were performed using SPSS 24.0 (IBM).

R43 EXPERIMENT 2		day 1						day 2						day 3						day 4					
		GROWTH (mm)		INHIBITION (%)	STATISTICS			GROWTH (mm)		INHIBITION (%)	STATISTICS			GROWTH (mm)		INHIBITION (%)	STATISTICS			GROWTH (mm)		INHIBITION (%)	STATISTICS		
Double Dish Set	TREATMENT	Mean	SD	Mean	$P \leq 0.05$	$P \leq 0.01$	$P \leq 0.001$	Mean	SD	Mean	$P \leq 0.05$	$P \leq 0.01$	$P \leq 0.001$	Mean	SD	Mean	$P \leq 0.05$	$P \leq 0.01$	$P \leq 0.001$	Mean	SD	Mean	$P \leq 0.05$	$P \leq 0.01$	$P \leq 0.001$
	CC	15.33	0.47	-	A	A	A	31.42	1.03	-	A	A	A	49.25	2.63	-	A	A	A	62.92	3.30	-	A	A	A
	R43/T34	10.67	0.72	30.43	B	B	BC	15.17	1.11	51.72	C	C	BC	17.00	2.09	65.48	C	BC	BC	18.58	2.46	70.46	C	BC	BC
	R43/T34-5.27	7.00	0.47	54.35	C	C	D	10.58	1.29	66.31	D	D	D	12.58	2.51	74.45	C	C	C	13.58	3.38	78.41	C	C	C
	R43/E20	11.50	1.11	25.00	B	B	B	18.92	1.26	39.79	B	B	B	22.83	2.76	53.64	B	B	B	27.17	3.25	56.82	B	B	B
	R43/E20-5.7	8.50	0.43	44.57	C	C	CD	13.33	0.98	57.56	C	CD	CD	16.67	1.76	66.16	C	BC	BC	19.42	3.01	69.14	C	BC	BC
Non-Vented VOC Chamber	TREATMENT	Mean	SD	Mean	$P \leq 0.05$	$P \leq 0.01$	$P \leq 0.001$	Mean	SD	Mean	$P \leq 0.05$	$P \leq 0.01$	$P \leq 0.001$	Mean	SD	Mean	$P \leq 0.05$	$P \leq 0.01$	$P \leq 0.001$	Mean	SD	Mean	$P \leq 0.05$	$P \leq 0.01$	$P \leq 0.001$
	CC	15.67	0.72	-	A	A	A	38.42	1.13	-	A	A	A	50.25	2.41	-	A	A	A	65.00	3.80	-	A	A	A
	R43/T34	11.92	0.32	23.94	C	C	B	19.83	0.64	48.37	C	C	C	26.67	1.36	46.93	C	C	BC	34.25	3.01	47.31	BC	BC	B
	R43/T34-5.27	7.50	0.33	52.13	E	E	D	13.25	0.32	65.51	E	E	E	19.42	0.57	61.36	D	D	D	25.50	0.88	60.77	D	D	C
	R43/E20	13.33	0.47	14.89	B	B	B	23.83	0.58	37.96	B	B	B	31.08	0.74	38.14	B	B	B	38.08	0.96	41.41	B	B	B
	R43/E20-5.7	9.50	0.33	39.36	D	D	C	16.67	0.98	56.62	D	D	D	23.67	1.25	52.90	C	C	CD	30.42	1.29	53.21	CD	CD	BC
Vented VOC Chamber	TREATMENT	Mean	SD	Mean	$P \leq 0.05$	$P \leq 0.01$	$P \leq 0.001$	Mean	SD	Mean	$P \leq 0.05$	$P \leq 0.01$	$P \leq 0.001$	Mean	SD	Mean	$P \leq 0.05$	$P \leq 0.01$	$P \leq 0.001$	Mean	SD	Mean	$P \leq 0.05$	$P \leq 0.01$	$P \leq 0.001$
	CC	14.75	1.40	-	A	A	A	31.92	1.42	-	A	A	AB	51.26	2.33	-	A	A	A	60.67	0.98	-	A	A	A
	R43/T34	14.33	1.28	2.82	A	A	A	29.67	1.61	7.05	A	A	AB	48.67	4.21	4.58	A	A	A	53.67	4.15	11.54	AB	AB	AB
	R43/T34-5.27	9.33	0.27	36.72	B	B	B	16.58	1.87	48.04	C	C	C	23.58	3.66	53.76	C	C	B	29.58	3.07	51.24	C	C	C
	R43/E20	15.42	0.42	-4.52	A	A	A	30.92	2.47	3.13	A	A	A	46.83	5.27	8.17	A	A	A	56.58	6.29	6.73	A	A	AB
	R43/E20-5.7	10.58	0.50	28.25	B	B	B	23.22	0.51	32.64	B	B	BC	35.22	1.02	30.94	B	B	AB	45.33	1.45	25.27	B	B	B

Supplementary table ST3. Experiment 1. Growth (mm) and Percentage of inhibition (PI) of *F. oxysporum* F3 confronted by *T. harzianum* T34, T34-5.27, E20, and E20-5.7 using DDS method (first row), Non-Vented VOC Chambers (second row), and Vented VOC Chambers (third row); after 3, 5, and 7 days post-inoculation. PI was calculated in relation to the control using the following equation proposed by Gotor-Vila et al. (2017): $[(C-T) / C] \times 100$. Where C is the diameter of the controls and T that of the treatments. PI is expressed as the mean of the four replicates. P values were obtained from growth results using one-way analysis of variance (ANOVA), after confirmation of normality and equality of variances, and were contrasted using Tukey's *post hoc* test. Capital letters represent the differences between treatments with $P \leq 0.05$; $P \leq 0.01$; and $P \leq 0.001$, respectively. All statistical analyses were performed using SPSS 24.0 (IBM).

F3 EXPERIMENT 1		day 3						day 5						day 7					
		GROWTH (mm)		INHIBITION (%)		STATISTICS		GROWTH (mm)		INHIBITION (%)		STATISTICS		GROWTH (mm)		INHIBITION (%)		STATISTICS	
Double Dish Set	TREATMENT	Mean	SD	Mean	$P \leq 0.05$	$P \leq 0.01$	$P \leq 0.001$	Mean	SD	Mean	$P \leq 0.05$	$P \leq 0.01$	$P \leq 0.001$	Mean	SD	Mean	$P \leq 0.05$	$P \leq 0.01$	$P \leq 0.001$
	CC	30.25	0.96	-	A	A	A	46.08	1.69	-	A	A	A	57.67	4.25	-	A	A	A
	F3/T34	19.00	2.19	37.19	BC	BC	BC	31.92	4.38	30.74	BC	BC	B	46.50	2.67	19.36	B	B	AB
	F3/T34-5.27	16.58	1.29	45.18	C	C	C	28.83	0.43	37.43	C	C	B	43.08	0.92	25.29	B	B	B
	F3/E20	22.08	1.17	27.00	B	B	B	35.25	1.10	23.51	B	B	B	48.42	1.66	16.04	B	B	AB
	F3/E20-5.7	18.50	1.60	38.84	C	BC	BC	32.25	1.52	30.02	BC	BC	B	41.67	4.51	27.75	B	B	B
Non-Vented VOC Chamber	TREATMENT	Mean	SD	Mean	$P \leq 0.05$	$P \leq 0.01$	$P \leq 0.001$	Mean	SD	Mean	$P \leq 0.05$	$P \leq 0.01$	$P \leq 0.001$	Mean	SD	Mean	$P \leq 0.05$	$P \leq 0.01$	$P \leq 0.001$
	CC	25.67	1.72	-	A	A	A	39.58	4.03	-	A	A	A	53.67	3.99	-	A	A	A
	F3/T34	24.00	0.98	6.49	A	AB	AB	38.25	0.88	3.37	A	A	AB	50.22	0.38	6.42	A	AB	A
	F3/T34-5.27	20.50	0.33	20.13	B	C	B	31.58	0.79	20.21	B	B	B	44.67	0.58	16.77	B	B	A
	F3/E20	25.42	0.63	0.97	A	A	A	38.42	0.96	2.95	A	A	AB	52.11	0.84	2.90	A	A	A
	F3/E20-5.7	21.58	0.83	15.91	B	BC	B	32.67	1.12	17.47	B	B	AB	44.33	0.58	17.39	B	B	A
Vented VOC Chamber	TREATMENT	Mean	SD	Mean	$P \leq 0.05$	$P \leq 0.01$	$P \leq 0.001$	Mean	SD	Mean	$P \leq 0.05$	$P \leq 0.01$	$P \leq 0.001$	Mean	SD	Mean	$P \leq 0.05$	$P \leq 0.01$	$P \leq 0.001$
	CC	26.25	0.57	-	C	C	C	37.67	0.88	-	C	B	BC	49.78	2.52	-	C	B	B
	F3/T34	28.92	0.79	-10.16	B	B	B	42.50	1.69	-12.83	B	A	AB	57.33	0.33	-15.18	B	A	A
	F3/T34-5.27	23.33	0.47	11.11	D	D	D	34.33	1.39	8.85	D	BC	C	44.42	2.11	10.77	D	C	B
	F3/E20	31.67	0.61	-20.63	A	A	A	46.08	1.26	-22.35	A	A	A	62.44	0.69	-25.45	A	A	A
	F3/E20-5.7	22.50	0.64	14.29	D	D	D	32.67	0.67	13.27	D	C	C	43.00	0.33	13.62	D	C	B

Supplementary table ST4. Experiment 2. Growth (mm) and Percentage of inhibition (PI) of *F. oxysporum* F3 confronted by *T. harzianum* T34, T34-5.27, E20, and E20-5.7 using DDS method (first row), Non-Vented VOC Chambers (second row), and Vented VOC Chambers (third row); after 3, 5, and 7 days post-inoculation. PI was calculated in relation to the control using the following equation proposed by Gotor-Vila et al. (2017): $[(C-T) / C] \times 100$. Where C is the diameter of the controls and T that of the treatments. PI is expressed as the mean of the four replicates. P values were obtained from growth results using one-way analysis of variance (ANOVA), after confirmation of normality and equality of variances, and were contrasted using Tukey's *post hoc* test. Capital letters represent the differences between treatments with $P \leq 0.05$; $P \leq 0.01$; and $P \leq 0.001$, respectively. All statistical analyses were performed using SPSS 24.0 (IBM).

F3 EXPERIMENT 2		day 3						day 5						day 7					
		GROWTH (mm)		INHIBITION (%)		STATISTICS		GROWTH (mm)		INHIBITION (%)		STATISTICS		GROWTH (mm)		INHIBITION (%)		STATISTICS	
Double Dish Set	TREATMENT	Mean	SD	Mean	P ≤ 0.05	P ≤ 0.01	P ≤ 0.001	Mean	SD	Mean	P ≤ 0.05	P ≤ 0.01	P ≤ 0.001	Mean	SD	Mean	P ≤ 0.05	P ≤ 0.01	P ≤ 0.001
	CC	26.17	1.29	-	A	A	A	41.08	0.88	-	A	A	A	53.67	2.16	-	A	A	A
	F3/T34	20.17	1.40	22.93	BC	BC	BC	30.92	1.87	24.75	B	B	B	42.75	3.14	20.34	B	BC	B
	F3/T34-5.27	16.83	0.64	35.67	D	D	C	26.33	1.44	35.90	C	C	B	37.42	1.13	30.28	C	C	B
	F3/E20	20.92	1.00	20.06	B	B	B	31.92	2.15	22.31	B	B	B	43.92	1.85	18.17	B	B	B
	F3/E20-5.7	17.83	0.96	31.85	CD	CD	BC	29.00	1.52	29.41	BC	BC	B	40.25	1.73	25.00	BC	BC	B
Non-Vented VOC Chamber	TREATMENT	Mean	SD	Mean	P ≤ 0.05	P ≤ 0.01	P ≤ 0.001	Mean	SD	Mean	P ≤ 0.05	P ≤ 0.01	P ≤ 0.001	Mean	SD	Mean	P ≤ 0.05	P ≤ 0.01	P ≤ 0.001
	CC	25.42	0.57	-	A	A	A	38.42	1.20	-	A	A	A	52.75	1.26	-	A	A	A
	F3/T34	22.17	0.79	12.79	B	B	B	33.83	0.43	11.93	C	B	B	47.54	1.23	9.87	B	B	B
	F3/T34-5.27	18.25	0.17	28.20	C	C	C	28.83	0.43	24.95	E	C	C	41.00	0.33	22.27	C	C	C
	F3/E20	24.92	0.57	1.97	A	A	A	36.50	0.79	4.99	B	A	A	48.58	1.00	7.90	B	B	B
	F3/E20-5.7	19.42	0.57	23.61	C	C	C	30.58	0.50	20.39	D	C	C	43.17	0.58	18.17	C	C	C
Vented VOC Chamber	TREATMENT	Mean	SD	Mean	P ≤ 0.05	P ≤ 0.01	P ≤ 0.001	Mean	SD	Mean	P ≤ 0.05	P ≤ 0.01	P ≤ 0.001	Mean	SD	Mean	P ≤ 0.05	P ≤ 0.01	P ≤ 0.001
	CC	24.25	0.50	-	B	B	B	38.75	0.74	-	B	B	A	52.58	2.28	-	B	B	A
	F3/T34	26.75	0.50	-10.31	A	A	AB	41.08	1.20	-6.02	AB	AB	A	54.83	1.55	-4.28	B	AB	A
	F3/T34-5.27	20.78	0.57	15.12	C	C	C	31.89	1.12	18.28	C	C	B	42.56	0.61	19.49	C	C	B
	F3/E20	27.67	0.27	-14.09	A	A	A	42.58	1.62	-9.89	A	A	A	58.67	1.00	-11.57	A	A	A
	F3/E20-5.7	21.17	1.29	12.71	C	C	C	32.42	1.83	16.34	C	C	B	44.50	2.01	15.37	C	C	B