# Instruction S3 – 3D-Printing guide

frame, left back         frames         PLA         1         PLA-general frame pight, back         frames         PLA         1         PLA-general frame pight, back         frames         PLA         1         PLA-general frame, pight, front         frames         PLA         1         PLA-general frame, plant, front         frames         PLA         1         PLA-general frame, plant, front         frames         PLA         1         PLA-general frame, plant, frames         PLA         4         PLA-general frame, plant, plan	STL-name	Folder	Filament	No	Slicer setting
frame right back   frames	frame_left_back	frames		1	PLA-general
frame injet front   frames	frame_left_front	frames		1	PLA-general
frame   Find   frames   PLA   1   PLA-general   frame   Index   frames   PLA   1   PLA-general   frame   Index   1   PLA-general   frame   Index   1   PLA-general   frame   Index   1   PLA-general   frame   PLA   1   PLA-general   frames   PLA   1   PLA-standard   cable clip2   frames   PLA   2   PLA-standard   cable clip3   frames   PLA   1   PLA-general   cable-label   X   electronic box   PLA white   2   PLA-standard   cable-label   X   electronic box   PLA white   2   PLA-standard   cable-label   X   electronic box   PLA white   2   PLA-standard   cable-label   Z   electronic box   PLA white   2   PLA-standard   PLA   cable-label   Z   electronic box   PLA white   2   PLA-standard   PLA   cable-label   Z   electronic box   PLA white   2   PLA-standard   PLA   cable-label   Z   electronic box   PLA white   2   PLA-standard   PLA   cable-label   Z   electronic box   PLA white   2   PLA-standard   PLA-general   Foot outside   PlA   3   PLA-general   Foot outside   PlA   3   PLA-general   PLA-general   PLA   3   PLA-general   PLA   3   PLA-general   PLA-general   PLA   3   PLA-general   PLA   3   PLA-general   PLA-general   PLA   3   PLA-general   PLA-gene		frames			
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Frame top book   frames					
frames   P.LA					
cable clip1         frames         PLA         15         PLA-standard           cable clip2         frames         PLA         2         PLA-standard           cable clip3         frames         PLA         2         PLA-standard           cable clip3 ut         frames         PLA         2         PLA-standard           cable support_electronic box         frames         PLA         1         PLA-general           cable-label X         electronic box         PLA white         2         PLA-standard           cable-label Y         electronic box         PLA white         2         PLA-standard           cable-label_ED         electronic box         PLA white         2         PLA-standard           cable-label_ED         electronic box         PLA white         2         PLA-standard           foot cutside         panels         PLA         3         PLA-standard           foot cutside         panels         PLA         3         PLA-general           foot cutside         panels         PLA         1         PLA-standard           cover y motor         panels         PLA         1         PLA-standard           cover autosampler mounting profile         panels         PLA					
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cable cilp3					
cable support electronic box  frames  PLA  20  PLA-standard  1 PLA-standard  cable-label X  electronic box  PLA while  2 PLA-standard  cable-label Y  electronic box  PLA while  2 PLA-standard  electronic box  PLA while  2 PLA-standard  3 PLA-general  6 PLA  4 PLA-standard  6 PLA  4 PLA-standard  6 PLA  4 PLA-standard  6 PLA  5 PLA  6 PLA  6 PLA  6 PLA  6 PLA-standard  6 PLA  6 PLA  6 PLA-standard  7 PLA-standard  7 PLA-standard  7 PLA-standard  8 PLA  7 PLA-standard  8 PLA  7 PLA-standard  8 PLA  7 PLA-standard  8 PLA  8 PLA  8 PLA  8 PLA  8 PLA  8 PLA-standard  9 P					
cable-label X cable-label X cable-label Y cable-label Z1 cable-label E0					
cable-label X electronic box PLA white 2 PLA-standard cable-label Y electronic box PLA white 2 PLA-standard cable-label Z1 electronic box PLA white 2 PLA-standard electronic box PLA white 2 PLA-standard electronic box PLA white 2 PLA-standard electronic box PLA white 1 PLA-standard planels PLA 3 PLA-general planels PLA 3 PLA-general planels PLA 1 PLA-standard electronic box PLA 1 PLA-general electronic box PLA-general electron				_	
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electronic box   PLA white   1   PLA-standard					
loot inside   panels   PLA   3   PLA-general	_				
Foot holder	cable-label_E0	electronic box	PLA white	1	PLA-standard
Foot holder	foot inside	nanole	DI A	2	DI A-general
front holder  cover y motor  cover y motor  cover autosampler mounting profile  panels  PLA  1 PLA-standard  cover autosampler mounting profile  panels  PLA  1 PLA-standard  cover autosampler motor holder  panels  PLA  1 PLA-standard  panels  PLA  1 PLA-standard  panels  PLA  1 PLA-standard  panels  PCCF2)  1 PCCF-general  PCCF2)  1 PCCF-general  P-axis pCCF  1 PCCF-general  P-axis tensioner  P-axis PCCF  P-axis PCCF  1 PCCF-general  P-axis tensioner  P-axis PCCF  PCCF-general  PCCF-g	_	<u> </u>			
cover y motor         panels         PLA         1         PLAstandard           cover autosampler mouting profile         panels         PLA         1         PLA-standard           cover autosampler motor holder         panels         PLA         1         PLA-standard           cover zutosampler motor         panels         PLA         1         PLA-standard           waste bottle holder         panels         PCF         1         PCCF-general           y-axis back         y-axis         PLA         1         PLA-strong           y-axis back         y-axis         PLA         1         PLA-strong           y-axis front         y-axis         PLA         1         PLA-strong           y-axis cart tensioner         y-axis         PCCF         1         PCCF-general           y-axis personer         y-axis         PLA         1         PLA-strong           x-axis left         x-axis         PLA         1         PLA-strong           x-axis left         x-axis         PLA         1         PLA-strong           x-axis left         x-axis         PLA         1         PLA-strong           x-axis valve holder         x-axis         PCCF         1         PCCF-genera					
cover autosampler mounting profile         panels         PLA         1         PLA-standard           cover zuf motor         panels         PLA         1         PLA-standard           cover zuf motor         panels         PLA         1         PLA-standard           waste bottle holder         panels         PCCF-20         1         PCCF-general           y-axis bokk         y-axis         PLA         1         PLA-strong           y-axis front         y-axis         PLA         1         PLA-strong           y-axis cart tensioner         y-axis         PCCF         1         PCCF-general           y-axis cork         y-axis         PLA         1         PLA-strong           x-axis left         x-axis         PCCF         1         PCCF-general           x-axis valve holder         x-axis         PCCF         1         PCCF-general      <		-			
cover autosampler motor holder         panels         PLA         1         PLA-standard cover 21 motor           cover 21 motor         panels         PCCF-3         1         PLA-standard panels           waste bottle holder         panels         PCCF-3         1         PCCF-general           y-axis back         y-axis         PLA         1         PLA-strong           y-axis front         y-axis         PLA         1         PLA-strong           y-axis front         y-axis         PLA         1         PLA-strong           y-axis tensioner         y-axis         PCCF         1         PCCF-general           y-axis cork         y-axis         PLA         1         PLA-strong           x-axis left         x-axis         PCCF         1         PCCF-general           x-axis left         x-axis         PCCF         1         PCCF-general		-			
cover z1 motor         panels         PLA         1         PLA-standard           waste bottle holder         panels         PCCF <sup>2)</sup> 1         PCCF-general           y-axis back         y-axis         PLA         1         PLA-strong           y-axis front         y-axis         PLA         1         PLA-strong           y-axis cart tensioner         y-axis         PCCF         1         PCCF-general           y-axis cork         y-axis         PLA         1         PLA-strong           x-axis left         x-axis         PLA         1         PLA-strong           x-axis sight         x-axis         PLA         1         PLA-strong           x-axis valve holder mount         x-axis         PCCF         1         PCCF-general           x-axis valve holder         x-axis         PCCF         1         PCCF-general           x-axis valve holder         x-axis         PCCF         1         PCCF-general           x-axis valve holder         x-axis         PCCF         1         PCCF-general           x-axis cart tensioner         x-axis         PCCF         1         PCCF-general           x-axis deat tensioner         x-axis         PCCF         1         P					
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y-axis front         y-axis         PLA         1         PLA-strong           y-axis cart tensioner         y-axis         PCCF         1         PCCF-general           y-axis tensioner         y-axis         PCCF         1         PCCF-general           y-axis cork         y-axis         PLA         1         PLA-general           x-axis cork         y-axis         PLA         1         PLA-general           x-axis left         x-axis         PLA         1         PLA-strong           x-axis left         x-axis         PLA         1         PLA-strong           x-axis left         x-axis         PLA         1         PLA-strong           x-axis valve holder         x-axis         PCCF         1         PCCF-general           x-axis valve holder         x-axis         PCCF         1         PCCF-general           x-axis carl tensioner         x-axis         PCCF         1         PCCF-general           x-axis carl tensioner         x-axis         PCCF         1         PCCF-general           x-axis distance check left         x-axis         PLA         2         PLA-general           x-axis distance check left         x-axis         PLA         1         PLA-gen	y-axis back	y-axis	PLA	1	PLA-strong
y-axis tensioner         y-axis         PCCF         1         PCCF-general           y-axis cork         y-axis         PLA         1         PLA-general           x-axis cork         y-axis         PLA         1         PLA-strong           x-axis right         x-axis         PLA         1         PLA-strong           x-axis right         x-axis         PCCF         1         PCCF-general           x-axis valve holder         x-axis         PCCF         1         PCCF-general           x-axis valve holder         x-axis         PCCF         1         PCCF-general           x-axis valve holder         x-axis         PCCF         1         PCCF-general           x-axis tensioner         x-axis         PCCF         1         PCCF-general           x-axis distance check left         x-axis         PLA         2         PLA-general           x-axis delte guide top left         x-axis         PLA         1         PLA-general           x-axis cable guide top right         x-axis         PLA         1         PLA-general           x-axis pedle pusher         e-axis         PCCF         1         PCCF-general           e-axis pump holder         e-axis         PCCF         1 <td></td> <td></td> <td></td> <td>1</td> <td></td>				1	
y-axis cork  Y-axis   PLA	y-axis_cart_tensioner	y-axis	PCCF	1	PCCF-general
X-axis left X-axis right X-axis		y-axis		1	PCCF-general
X-axis right   X-axis   PLA   1   PLA-strong   X-axis valve holder mount   X-axis   PCCF   1   PCCF-general   X-axis valve holder   X-axis   PCCF   1   PCCF-general   X-axis valve holder   X-axis   PCCF   1   PCCF-general   X-axis   PLA   2   PLA-general   X-axis   PLA   2   PLA-general   X-axis   PLA   2   PLA-general   X-axis   PLA   3   PLA-general   X-axis   PLA   4   PLA-general   X-axis   PLA   1   PLA-general   X-axis   PLA   1   PLA-general   PCCF-general   X-axis   PCCF   1   PCCF-general   PCCF	y-axis_cork	y-axis	PLA	1	PLA-general
X-axis right   X-axis   PLA   1   PLA-strong   X-axis valve holder mount   X-axis   PCCF   1   PCCF-general   X-axis valve holder   X-axis   PCCF   1   PCCF-general   X-axis valve holder   X-axis   PCCF   1   PCCF-general			DI 4		DIA 1
X-axis valve holder mount   X-axis   PCCF   1   PCCF-general   X-axis valve holder   X-axis   PCCF   1   PCCF-general   X-axis valve holder   X-axis   PCCF   1   PCCF-general   X-axis cart tensioner   X-axis   PCCF   1   PCCF-general   X-axis tensioner   X-axis   PCCF   1   PCCF-general   X-axis tensioner   X-axis   PCCF   1   PCCF-general   X-axis distance check left   X-axis   PLA   2   PLA-general   X-axis cable_guide_top_left   X-axis   PLA   1   PLA-general   X-axis cable_guide_top_left   X-axis   PLA   1   PLA-general   X-axis cable_guide_top_right   X-axis   PLA   1   PLA-general   PCCF-general   PCCF-gen					
x-axis valve holder x-axis cart tensioner x-axis cart tensioner x-axis peccent x-axis distance_check_left x-axis peccent x-axis distance_check_left x-axis peccent x-axis p					
x-axis cart tensioner x-axis tensioner x-axis tensioner x-axis tensioner x-axis tensioner x-axis tensioner x-axis distance check left x-axis distance check left x-axis pLA x-axis distance check left x-axis pLA					
x-axis tensioner x-axis distance check left x-axis   PCCF   1   PCCF-general   x-axis   PLA   2   PLA-general   x-axis   PLA   1   PLA-general   e-axis   PCCF   1   PCCF-general   e-axis   PCCF   1   PCCF-general   e-axis   PLA   1   PLA-general   e-axis   PLA   1   PLA-general   e-axis   PLA   1   PLA-strong   e-axis   PLA   1   PLA-strong   e-axis   PLA   1   PLA-strong   e-axis   PLA   1   PLA-strong   e-axis   PLA   1   PLA-general   d-axis   PLA   1   PLA-general   d-axis   PCCF   1   PCCF-general   d-axis   P					
x-axis distance check left   x-axis   PLA   2   PLA-general   x-axis   cable guide top left   x-axis   PLA   1   PLA-general   x-axis   PCF   1   PCF-general   x-a					
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x-axis cable guide top right  x-axis PLA 1 PLA-general  e-axis motor holder e-axis needle pusher e-axis needle pusher e-axis pump holder e-axis PLA 1 PLA-general e-axis pump holder e-axis PLA 1 PLA-general e-axis connector long e-axis PLA 2 PLA-strong e-axis connector bottom e-axis PLA 1 PLA-strong e-axis PLA 1 PLA-strong e-axis Onnector top e-axis PLA 1 PLA-strong e-axis May-valve holder e-axis PLA 1 PLA-general 3way-valve manifold e-axis PCF 1 PCCF-general micropump manifold drill-aid e-axis PCF 1 PCCF-general micropump manifold drill-aid e-axis PCCF 1 PCCF-general autosampler vial rack autosampler PCCF 1 PCCF-general autosampler vial rack autosampler PCCF 1 PCCF-general autosampler slider autosampler PCCF 1 PCCF-general autosampler slider tip autosampler PCCF 1 PCCF-slider-tip autosampler motor holder autosampler PLA 1 PLA-strong autosampler mounting profile autosampler PLA 1 PLA-strong autosampler mounting profile autosampler PLA 1 PLA-strong autosampler glistance-lool autosampler PA12 <sup>41</sup> 2 PA-standard rinsing waste bottle autosampler PA12 <sup>41</sup> 1 PA-standard					
e-axis motor holder e-axis PCCF 1 PCCF-general e-axis needle pusher e-axis PCCF 1 PCCF-general e-axis pump holder e-axis PLA 1 PLA-general e-axis connector long e-axis PLA 2 PLA-strong e-axis connector bottom e-axis PLA 1 PLA-strong e-axis connector top e-axis PLA 1 PLA-strong e-axis Onnector top e-axis PLA 1 PLA-strong e-axis Away-valve holder e-axis PLA 1 PLA-general PLA-general Micropump manifold e-axis PCCF 1 PCCF-general micropump manifold e-axis PCCF 1 PCCF-general micropump manifold drill-aid e-axis PCCF 1 PCCF-general e-axis PLA 1 PLA-general micropump manifold drill-aid e-axis PCCF 1 PCCF-general micropump manifold drill-aid e-axis PCCF 1 PCCF-general e-axis PLA 1 PLA-general e-axis PLA 1 PLA-general mutosampler vial rack autosampler PCCF 1 PCCF-general autosampler slider autosampler PCCF 1 PCCF-general autosampler slider tip autosampler PCCF 1 PCCF-slider-tip autosampler slider tip autosampler PCCF 1 PCCF-slider-tip autosampler mounting profile autosampler PLA 1 PLA-strong autosampler mounting profile autosampler PLA 1 PLA-strong autosampler mounting profile autosampler PA12 <sup>41</sup> 2 PA-standard rinsing waste bottle autosampler PA12 <sup>41</sup> 1 PA-standard					
e-axis needle pusher e-axis pump holder e-axis pump					
e-axis pump holder       e-axis       PLA       1       PLA-general         e-axis connector long       e-axis       PLA       2       PLA-strong         e-axis connector bottom       e-axis       PLA       1       PLA-strong         e-axis connector top       e-axis       PLA       1       PLA-strong         e-axis 3way-valve holder       e-axis       PLA       1       PLA-general         3way-valve manifold       e-axis       PCCF       1       PCCF-general         micropump manifold drill-aid       e-axis       PCCF       1       PCCF-general         micropump manifold drill-aid       e-axis       PCCF       1       PCCF-general         cutting aid Prusa PTFE tube       e-axis       PLA       1       PLA-general         autosampler vial rack       autosampler       PCCF       1       PCCF-general         autosampler vial rack       autosampler       PCCF       1       PCCF-general         autosampler slider       autosampler       PCCF       1       PCCF-general         autosampler slider tip       autosampler       PCCF       1       PCCF-slider-tip         autosampler motor holder       autosampler       PLA       1       PLA-strong					
e-axis connector long e-axis PLA 2 PLA-strong e-axis connector bottom e-axis PLA 1 PLA-strong e-axis connector top e-axis PLA 1 PLA-strong e-axis connector top e-axis PLA 1 PLA-strong e-axis 3way-valve holder e-axis PLA 1 PLA-general 3way-valve manifold e-axis PCCF 1 PCCF-general micropump manifold drill-aid e-axis PCCF 1 PCCF-general 3way-valve manifold drill-aid e-axis PCCF 1 PCCF-general cutting aid Prusa PTFE tube e-axis PCCF 1 PCCF-general cutting aid Prusa PTFE tube e-axis PCCF 1 PCCF-general autosampler vial rack autosampler PCCF 1 PCCF-general autosampler slider autosampler PCCF 1 PCCF-general autosampler slider ip autosampler PCCF 1 PCCF-slider-tip autosampler motor holder autosampler PLA 1 PLA-strong autosampler mounting profile autosampler PLA 1 PLA-strong autosampler distance-tool autosampler PLA 1 PLA-strong autosampler distance-tool autosampler PA12 1 PA-standard rinsing waste bottle autosampler PA12 1 PA-standard					
e-axis connector_bottom e-axis connector_top e-axis connector_top e-axis					
e-axis_connector_top					
e-axis 3way-valve holder  3way-valve manifold  e-axis  PCCF  pCCF-general  cutting aid Prusa PTFE tube  e-axis  pCCF  pCCF  pCCF-general  autosampler vial rack  autosampler vial rack holder  autosampler pCCF  pCCF-general  autosampler pCCF  pCCF-slider-tip  autosampler pCCF  pCCF-slider-tip  autosampler pCCF  pCCF-slider-tip  autosampler pLA  pLA-strong  autosampler distance-tool  autosampler pLA  pLA-strong  autosampler distance-tool  rinsing waste bottle  autosampler pA12  pA-standard					
3way-valve manifold e-axis PCCF 1 PCCF-general micropump manifold e-axis PCCF 1 PCCF-general 3way-valve manifold drill-aid e-axis PCCF 1 PCCF-general PCCF-general micropump manifold drill-aid e-axis PCCF 1 PCCF-general e-axis PCCF 1 PCCF-general e-axis PLA 1 PLA-general e-axis PLA 1 PLA-general e-axis PLA 1 PLA-general e-axis PLA 1 PCCF-general e-axis PLA 1 PCCF-general e-axis PCCF 1 PCCF-general	'				U
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3way-valve manifold drill-aid       e-axis       PCCF       1       PCCF-general         micropump manifold drill-aid       e-axis       PCCF       1       PCCF-general         cutting aid Prusa PTFE tube       e-axis       PLA       1       PLA-general         autosampler_vial_rack       autosampler       PCCF       1       PCCF-general         autosampler_vial_rack holder       autosampler       PCCF       1       PCCF-general         autosampler_slider       autosampler       PCCF       1       PCCF-general         autosampler_slider       autosampler       PCCF       1       PCCF-general         autosampler_motor_blider       autosampler       PCCF       1       PCCF-general         autosampler_motor_holder       autosampler       PLA       1       PLA-strong         autosampler_mounting_profile       autosampler       PLA       1       PLA-strong         autosampler_distance-tool       autosampler       PLA       1       PLA-standard         rinsing_waste_bottle       autosampler       PA12       2       PA-spiral-vase         rinsing_bottle_cap       autosampler       PA12       1       PA-standard					
micropump manifold_drill-aid e-axis PCCF 1 PCCF-general cutting_aid_Prusa_PTFE_tube e-axis PLA 1 PLA-general  autosampler_vial_rack autosampler PCCF 1 PCCF-general autosampler_vial_rack_holder autosampler PCCF 1 PCCF-general autosampler_slider autosampler PCCF 1 PCCF-slider-tip autosampler_slider_tip autosampler PCCF 1 PCCF-slider-tip autosampler_motor_holder autosampler PLA 1 PLA-strong autosampler_mounting_profile autosampler PLA 1 PLA-strong autosampler_distance-tool autosampler PLA 1 PLA-standard rinsing_waste_bottle autosampler PA12 1 PA-standard  autosampler_cap autosampler PA12 1 PA-standard					
cutting_aid_Prusa_PTFE_tube       e-axis       PLA       1       PLA-general         autosampler_vial_rack       autosampler       PCCF       1       PCCF-general         autosampler_vial_rack_holder       autosampler       PCCF       1       PCCF-general         autosampler_slider       autosampler       PCCF       1       PCCF-slider-tip         autosampler_slider_tip       autosampler       PCCF       1       PCCF-slider-tip         autosampler_motor_holder       autosampler       PLA       1       PLA-strong         autosampler_mounting_profile       autosampler       PLA       1       PLA-strong         autosampler_distance-tool       autosampler       PLA       1       PLA-standard         rinsing_waste_bottle       autosampler       PA12       2       PA-spiral-vase         rinsing_bottle_cap       autosampler       PA12       1       PA-standard					
autosampler_vial_rack autosampler PCCF 1 PCCF-general autosampler_vial_rack_holder autosampler PCCF 1 PCCF-general autosampler_slider autosampler PCCF 1 PCCF-slider-tip autosampler_slider_tip autosampler PCCF 1 PCCF-slider-tip autosampler_motor_holder autosampler PLA 1 PLA-strong autosampler_mounting_profile autosampler PLA 1 PLA-strong autosampler_distance-tool autosampler PLA 1 PLA-standard rinsing_waste_bottle autosampler PA124 2 PA-spiral-vase rinsing_bottle_cap autosampler PA12 1 PA-standard					
autosampler vial rack holder     autosampler     PCCF     1     PCCF-general       autosampler slider     autosampler     PCCF     1     PCCF-slider-tip       autosampler slider tip     autosampler     PCCF     1     PCCF-slider-tip       autosampler motor holder     autosampler     PLA     1     PLA-strong       autosampler mounting profile     autosampler     PLA     1     PLA-strong       autosampler_distance-tool     autosampler     PLA     1     PLA-standard       rinsing_waste_bottle     autosampler     PA12 <sup>4</sup> 2     PA-spiral-vase       rinsing_bottle_cap     autosampler     PA12     1     PA-standard					
autosampler slider autosampler PCCF 1 PCCF-slider-tip autosampler slider_tip autosampler PCCF 1 PCCF-slider-tip autosampler motor_holder autosampler PLA 1 PLA-strong autosampler_mounting_profile autosampler PLA 1 PLA-strong autosampler_distance-tool autosampler PLA 1 PLA-standard rinsing_waste_bottle autosampler PA12 2 PA-spiral-vase rinsing_bottle_cap autosampler PA12 1 PA-standard					PCCF-general
autosampler slider tip     autosampler     PCCF     1     PCCF-slider-tip       autosampler motor holder     autosampler     PLA     1     PLA-strong       autosampler mounting profile     autosampler     PLA     1     PLA-strong       autosampler_distance-tool     autosampler     PLA     1     PLA-standard       rinsing_waste_bottle     autosampler     PA12 <sup>4</sup> )     2     PA-spiral-vase       rinsing_bottle_cap     autosampler     PA12     1     PA-standard					
autosampler motor_holder     autosampler     PLA     1     PLA-strong       autosampler mounting profile     autosampler     PLA     1     PLA-strong       autosampler_distance-tool     autosampler     PLA     1     PLA-standard       rinsing_waste_bottle     autosampler     PA12 <sup>4</sup> )     2     PA-spiral-vase       rinsing_bottle_cap     autosampler     PA12     1     PA-standard				_	
autosampler mounting profile     autosampler     PLA     1     PLA-strong       autosampler_distance-tool     autosampler     PLA     1     PLA-standard       rinsing_waste_bottle     autosampler     PA12 <sup>4</sup> )     2     PA-spiral-vase       rinsing_bottle_cap     autosampler     PA12     1     PA-standard					
autosampler_distance-tool     autosampler     PLA     1     PLA-standard       rinsing_waste_bottle     autosampler     PA12 <sup>4</sup> )     2     PA-spiral-vase       rinsing_bottle_cap     autosampler     PA12     1     PA-standard					Ü
rinsing_waste_bottle autosampler PA12 <sup>4)</sup> 2 PA-spiral-vase rinsing_bottle_cap autosampler PA12 1 PA-standard					
rinsing_bottle_cap autosampler PA12 1 PA-standard					
				_	
	rinsing_bottle_cap	autosampler	PA12	1	PA-standard
syringe-pump_body   syringe pump   PCCF   1   PCCF-general	syringe-numn hody	evringe numn	PCCF	1	PCCF-general

syringe-pump_clip	syringe pump	PCCF	1	PCCF-general
syringe-pump_syringe_holder_adapter_2mL	syringe pump	PCCF	1	PCCF-general
syringe-pump_syringe_holder_adapter_5mL	syringe pump	PCCF	1	PCCF-general
syringe-pump_syringe_holder_adapter_10mL	syringe pump	PCCF	1	PCCF-general
syringe-pump pusher base	syringe pump	PCCF	1	PCCF-general
syringe-pump_pusher_syringe_adapter_2mL	syringe pump	PCCF	1	PCCF-general
syringe-pump_pusher_syringe_adapter_5mL	syringe pump	PCCF	1	PCCF-general
syringe-pump_pusher_syringe_adapter_10mL	syringe pump	PCCF	1	PCCF-general
syringe-pump plug steel rods	syringe pump	PCCF	+ ' -	PCCF-general
3ymige-pamp_plug_steel_rous	Syringe pump	1 001		1 OOI -general
multifunctional plate-holder front	plate holder	PCCF	1	PCCF-general
multifunctional plate-holder back		PCCF	1	PCCF-general
	plate holder plate holder	PCCF		
multifunctional_plate-holder_plug			1	PCCF-general
multifunctional_plate-holder_cover_development	plate holder	PCCF	1	PCCF-general
plate-holder_simple_front	plate holder	PLA	1	PLA-general
plate-holder_simple_back	plate holder	PLA	1	PLA-general
plate-holder_backlight_front	plate holder	PLA white	1	PLA-general
plate-holder_backlight_back	plate holder	PLA white	1	PLA-general
plate-holder_backlight_plug	plate holder	PLA white	1	PLA-general
cutting-aid_plexi-glass	plate holder	PLA	1	PLA-general
camera-cabinet_body	camera	PLA matte <sup>3)</sup>	1	PLA-general
camera-cabinet_facing	camera	PLA	1	PLA-general
camera-cabinet holder	camera	PLA	1	PLA-strong
camera-cabinet top	camera	PLA matte	1	PLA-general
camera-cabinet UV-filter protect	camera	PLA	2	PLA-general
camera-cabinet module3-adapter, option	camera	PLA	1	PLA-general
damera dabinot_modalee adapter, epiteri	Garriora		<u> </u>	1 Er general
electronic-box body	electronic box	PLA	1	PLA-general
electronic-box_body electronic-box spindle-cover	electronic box	PLA	1	PLA-general
electronic-box_spiritale-cover	electronic box	PLA	1 1	PLA-general
electronic-box_cover		PLA white	1	PLA-general PLA-standard
	electronic box			
DC-power-jacket_housing	electronic box	PLA	1	PLA-general
DC-power-jacket_housing_cover	electronic box	PLA	1	PLA-general
	1 12	DI 4		DIA 1
nebulizer_chamber_main	nebulizer	PLA	1	PLA-standard
nebulizer_chamber_extension	nebulizer	PLA	1	PLA-standard
nebulizer_chamber_lid	nebulizer	PLA	1	PLA-standard
nebulizer atomizer part-1		PA12		
	nebulizer		1	PA-standard
nebulizer_atomizer_part-2	nebulizer	PA12	1	PA-standard
nebulizer_atomizer_part-2	nebulizer	PA12 PLA	1	PA-standard PLA-standard
nebulizer_atomizer_part-2	nebulizer	PA12	1	PA-standard
nebulizer atomizer part-2 nebulizer atomizer lid	nebulizer nebulizer	PA12 PLA	1	PA-standard PLA-standard
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator inner bottom mini-incubator outer bottom mini-incubator inner lid	nebulizer nebulizer mini-incubator	PA12 PLA PLA PLA PLA	1 1	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard
nebulizer atomizer part-2 nebulizer atomizer lid mini-incubator inner bottom mini-incubator outer bottom	nebulizer nebulizer mini-incubator mini-incubator	PA12 PLA PLA PLA	1 1 1 1 1	PA-standard PLA-standard PLA-standard PLA-standard
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator inner bottom mini-incubator outer bottom mini-incubator inner lid	nebulizer nebulizer mini-incubator mini-incubator mini-incubator	PA12 PLA PLA PLA PLA	1 1 1 1 1	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator inner bottom mini-incubator outer bottom mini-incubator inner lid	nebulizer nebulizer mini-incubator mini-incubator mini-incubator	PA12 PLA PLA PLA PLA	1 1 1 1 1	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard
nebulizer atomizer part-2 nebulizer atomizer lid mini-incubator inner bottom mini-incubator outer bottom mini-incubator inner lid mini-incubator outer lid	nebulizer nebulizer mini-incubator mini-incubator mini-incubator mini-incubator	PA12 PLA PLA PLA PLA PLA	1 1 1 1 1 1 1	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator_inner_bottom mini-incubator_outer_bottom mini-incubator_inner_lid mini-incubator_outer_lid mini-shaker_burling	nebulizer nebulizer mini-incubator mini-incubator mini-incubator mini-incubator mini-incubator mini-incubator	PA12 PLA PLA PLA PLA PLA PLA PLA PCF	1 1 1 1 1 1 1 3	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PCF-general
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator_inner_bottom mini-incubator_outer_bottom mini-incubator_inner_lid mini-incubator_outer_lid  mini-shaker_burling mini-shaker_excenter mini-shaker_motor_adapter	nebulizer nebulizer nebulizer mini-incubator mini-incubator mini-incubator mini-incubator mini shaker mini shaker mini shaker	PA12 PLA PLA PLA PLA PLA PLA PCF PCCF	1 1 1 1 1 1 1 1 3 2	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PCF-general PCCF-general PCCF-general
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator_inner_bottom mini-incubator_outer_bottom mini-incubator_inner_lid mini-incubator_outer_lid  mini-shaker_burling mini-shaker_excenter mini-shaker_motor_adapter mini-shaker_base	nebulizer nebulizer nebulizer mini-incubator mini-incubator mini-incubator mini-incubator mini shaker mini shaker mini shaker mini shaker	PA12 PLA	1 1 1 1 1 1 1 3 2	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PCF-general PCCF-general PCCF-general PLA-general
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator inner bottom mini-incubator outer bottom mini-incubator inner lid mini-incubator outer lid  mini-shaker burling mini-shaker excenter mini-shaker motor adapter mini-shaker base mini-shaker platform	nebulizer nebulizer nebulizer mini-incubator mini-incubator mini-incubator mini-incubator mini shaker mini shaker mini shaker mini shaker mini shaker	PA12 PLA	1 1 1 1 1 1 1 1 3 2	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PCF-general PCCF-general PCCF-general PLA-general PLA-general
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator_inner bottom mini-incubator_outer bottom mini-incubator_inner lid mini-incubator_outer_lid  mini-shaker_burling mini-shaker_excenter mini-shaker_motor_adapter mini-shaker_base mini-shaker_platform mini-shaker_platform_support	nebulizer nebulizer nebulizer mini-incubator mini-incubator mini-incubator mini-incubator mini shaker	PA12 PLA	1 1 1 1 1 1 1 1 3 2 1 1 1 1	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PCF-general PCCF-general PCCF-general PLA-general PLA-general PLA-general
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator_inner bottom mini-incubator_outer bottom mini-incubator_inner lid mini-incubator_outer lid  mini-shaker_burling mini-shaker_excenter mini-shaker_motor_adapter mini-shaker_base mini-shaker_platform mini-shaker_platform_support mini-shaker_base_cover	nebulizer nebulizer nebulizer  mini-incubator mini-incubator mini-incubator mini-incubator mini shaker	PA12 PLA PLA PLA PLA PLA PLA PLA PLA PLA PCF PCCF PCCF PCA PLA PLA PLA	1 1 1 1 1 1 1 1 3 2 1 1 1 1 1 1	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PCF-general PCCF-general PCF-general PLA-general PLA-general PLA-general PLA-general
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator inner bottom mini-incubator outer bottom mini-incubator outer lid mini-incubator outer lid  mini-shaker burling mini-shaker excenter mini-shaker motor adapter mini-shaker platform mini-shaker platform mini-shaker base cover mini-shaker base cover mini-shaker base cover	nebulizer nebulizer nebulizer  mini-incubator mini-incubator mini-incubator mini-incubator mini shaker	PA12 PLA PLA PLA PLA PLA PLA PLA PLA PLA PCF PCCF PCCF PLA PLA PLA PLA PLA	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PCF-general PCCF-general PCF-general PLA-general PLA-general PLA-general PLA-general PLA-general
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator inner bottom mini-incubator outer bottom mini-incubator inner lid mini-incubator outer lid  mini-shaker burling mini-shaker excenter mini-shaker motor adapter mini-shaker base mini-shaker platform mini-shaker platform support mini-shaker base cover mini-shaker board holder mini-shaker heated hood	nebulizer nebulizer nebulizer mini-incubator mini-incubator mini-incubator mini-incubator mini shaker	PA12 PLA PLA PLA PLA PCF PCCF PCCF PCCF PLA	1 1 1 1 1 1 1 3 2 1 1 1 1 1 1 1 1	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PCF-general PCCF-general PCF-general PLA-general PLA-general PLA-general PLA-general PLA-general PLA-general
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator inner bottom mini-incubator outer bottom mini-incubator outer lid mini-incubator outer lid  mini-shaker burling mini-shaker excenter mini-shaker motor adapter mini-shaker base mini-shaker platform mini-shaker base cover mini-shaker base cover mini-shaker board holder mini-shaker heated hood cover	nebulizer nebulizer nebulizer mini-incubator mini-incubator mini-incubator mini-incubator mini shaker	PA12 PLA PLA PLA PLA PCCF PCCF PCCF PLA	1 1 1 1 1 1 1 1 3 2 1 1 1 1 1 1 1 1 1 1	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PCF-general PCCF-general PCF-general PLA-general PLA-general PLA-general PLA-general PLA-standard PLA-standard PLA-standard PLA-standard
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator inner bottom mini-incubator outer bottom mini-incubator outer lid mini-incubator outer lid  mini-shaker burling mini-shaker excenter mini-shaker motor adapter mini-shaker base mini-shaker platform mini-shaker platform support mini-shaker base cover mini-shaker board holder mini-shaker heated hood mini-shaker heated hood cover mini-shaker heated hood cable support	nebulizer nebulizer nebulizer mini-incubator mini-incubator mini-incubator mini-incubator mini shaker	PA12 PLA PLA PLA PLA PCCF PCCF PCCF PLA	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PCF-general PCCF-general PCCF-general PLA-general PLA-general PLA-general PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator inner bottom mini-incubator outer bottom mini-incubator outer lid mini-incubator outer lid  mini-shaker burling mini-shaker excenter mini-shaker motor adapter mini-shaker base mini-shaker platform mini-shaker base cover mini-shaker base cover mini-shaker board holder mini-shaker heated hood cover	nebulizer nebulizer nebulizer mini-incubator mini-incubator mini-incubator mini-incubator mini shaker	PA12 PLA PLA PLA PLA PCCF PCCF PCCF PLA	1 1 1 1 1 1 1 1 3 2 1 1 1 1 1 1 1 1 1 1	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PCF-general PCCF-general PCF-general PLA-general PLA-general PLA-general PLA-general PLA-standard PLA-standard PLA-standard PLA-standard
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator inner bottom mini-incubator outer bottom mini-incubator outer lid mini-incubator outer lid  mini-shaker burling mini-shaker excenter mini-shaker motor adapter mini-shaker base mini-shaker platform mini-shaker platform support mini-shaker base cover mini-shaker board holder mini-shaker heated hood mini-shaker heated hood cover mini-shaker heated hood cable support mini-shaker washer	nebulizer nebulizer nebulizer mini-incubator mini-incubator mini-incubator mini-incubator mini shaker	PA12 PLA PLA PLA PLA PCCF PCCF PCCF PLA	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PCF-general PCCF-general PCF-general PLA-general PLA-general PLA-general PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator inner bottom mini-incubator outer bottom mini-incubator outer lid mini-incubator outer lid  mini-shaker burling mini-shaker excenter mini-shaker motor adapter mini-shaker base mini-shaker platform mini-shaker platform support mini-shaker board holder mini-shaker heated hood mini-shaker heated hood cover mini-shaker heated hood cable support mini-shaker washer  handle allen-key 1.5mm	nebulizer nebulizer nebulizer mini-incubator mini-incubator mini-incubator mini-incubator mini shaker	PA12 PLA PLA PLA PLA PCCF PCCF PCCF PLA	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PCF-general PCF-general PCF-general PLA-general PLA-general PLA-general PLA-standard
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator inner bottom mini-incubator outer bottom mini-incubator outer lid mini-incubator outer lid  mini-shaker burling mini-shaker excenter mini-shaker motor adapter mini-shaker base mini-shaker platform mini-shaker platform support mini-shaker base cover mini-shaker board holder mini-shaker heated hood mini-shaker heated hood cover mini-shaker heated hood cable support mini-shaker washer  handle allen-key 1.5mm handle allen-key 2mm	nebulizer nebulizer nebulizer  mini-incubator mini-incubator mini-incubator mini-incubator mini shaker tools tools	PA12 PLA PLA PLA PLA PCCF PCCF PCCF PLA	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PCF-general PCF-general PCF-general PLA-general PLA-general PLA-general PLA-standard
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator inner bottom mini-incubator outer bottom mini-incubator outer lid mini-incubator outer lid  mini-shaker burling mini-shaker excenter mini-shaker motor adapter mini-shaker base mini-shaker platform mini-shaker platform support mini-shaker base cover mini-shaker board holder mini-shaker heated hood mini-shaker heated hood cover mini-shaker heated hood cover mini-shaker washer  handle allen-key 1.5mm handle_for_thread_tap_M2-M2.5	nebulizer nebulizer nebulizer  mini-incubator mini-incubator mini-incubator mini-incubator mini shaker tools tools	PA12 PLA PLA PLA PLA PCCF PCCF PCCF PLA	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PCF-general PCF-general PCF-general PLA-general PLA-general PLA-general PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-concentric PLA-concentric
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator inner bottom mini-incubator outer bottom mini-incubator outer lid mini-incubator outer lid  mini-shaker burling mini-shaker excenter mini-shaker motor adapter mini-shaker base mini-shaker platform mini-shaker platform support mini-shaker base cover mini-shaker base cover mini-shaker based hood mini-shaker heated hood mini-shaker heated hood cable support mini-shaker washer  handle allen-key 1.5mm handle allen-key 2mm handle for thread tap M2-M2.5 handle for thread tap M3	nebulizer nebulizer nebulizer  mini-incubator mini-incubator mini-incubator mini-incubator mini shaker tools tools tools	PA12 PLA PLA PLA PLA PCCF PCCF PCCF PLA	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PCF-general PCF-general PCF-general PLA-general PLA-general PLA-general PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-concentric PLA-concentric PLA-concentric
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator inner bottom mini-incubator outer bottom mini-incubator outer lid mini-incubator outer lid  mini-shaker burling mini-shaker excenter mini-shaker motor adapter mini-shaker base mini-shaker platform mini-shaker platform support mini-shaker base cover mini-shaker base cover mini-shaker based hood mini-shaker heated hood cover mini-shaker heated hood cable support mini-shaker washer  handle allen-key 1.5mm handle for thread tap M2-M2.5 handle for thread tap M3 handle for thread tap M4	nebulizer nebulizer nebulizer  mini-incubator mini-incubator mini-incubator mini-incubator mini shaker tools tools tools tools	PA12 PLA PLA PLA PLA PCCF PCCF PCCF PLA	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PCF-general PCF-general PCF-general PLA-general PLA-general PLA-general PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-concentric PLA-concentric PLA-concentric PLA-concentric
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator outer bottom mini-incubator outer bottom mini-incubator outer lid mini-incubator outer lid  mini-shaker burling mini-shaker excenter mini-shaker motor adapter mini-shaker platform mini-shaker platform support mini-shaker base cover mini-shaker based hood cover mini-shaker heated hood cable support mini-shaker washer  handle allen-key 1.5mm handle allen-key 2mm handle for thread tap M2-M2.5 handle for thread tap M3 handle for thread tap M4 handle for thread tap M4	nebulizer nebulizer nebulizer  mini-incubator mini-incubator mini-incubator mini-incubator mini-incubator mini shaker tools tools tools tools tools	PA12 PLA PLA PLA PLA PCCF PCCF PCCF PLA	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PCCF-general PCCF-general PCCF-general PLA-general PLA-general PLA-general PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-concentric PLA-concentric PLA-concentric PLA-concentric PLA-concentric PLA-concentric PLA-concentric
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator outer bottom mini-incubator outer bottom mini-incubator outer lid mini-incubator outer lid  mini-shaker burling mini-shaker excenter mini-shaker base mini-shaker platform mini-shaker platform mini-shaker base cover mini-shaker based hood cover mini-shaker heated hood cable support mini-shaker washer  handle allen-key 1.5mm handle allen-key 2mm handle for thread tap M2-M2.5 handle for thread tap M3 handle for thread tap M4 handle for thread tap M4 handle for thread tap M5 handle for thread tap UNF-6x40	nebulizer nebulizer nebulizer  mini-incubator mini-incubator mini-incubator mini-incubator mini shaker tools tools tools tools tools tools	PA12 PLA	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PCF-general PCF-general PCF-general PLA-general PLA-general PLA-general PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-concentric PLA-concentric PLA-concentric PLA-concentric PLA-concentric PLA-concentric PLA-concentric PLA-concentric PLA-concentric
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator inner bottom mini-incubator outer bottom mini-incubator outer lid mini-incubator outer lid  mini-shaker burling mini-shaker burling mini-shaker motor adapter mini-shaker platform mini-shaker platform support mini-shaker base cover mini-shaker base base base base base base base base	nebulizer nebulizer nebulizer  mini-incubator mini-incubator mini-incubator mini-incubator mini shaker tools tools tools tools tools tools tools tools	PA12 PLA	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PCCF-general PCCF-general PCCF-general PLA-general PLA-general PLA-general PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-concentric
nebulizer atomizer part-2 nebulizer atomizer lid  mini-incubator inner bottom mini-incubator outer bottom mini-incubator outer lid mini-incubator outer lid  mini-shaker burling mini-shaker excenter mini-shaker motor adapter mini-shaker platform mini-shaker platform support mini-shaker base cover mini-shaker base cover mini-shaker base dod mini-shaker base cover mini-shaker base cover mini-shaker base dod mini-shaker base dod mini-shaker heated hood mini-shaker heated hood cover mini-shaker heated hood cable support mini-shaker washer  handle allen-key 1.5mm handle allen-key 2mm handle for thread tap M2-M2.5 handle for thread tap M3 handle for thread tap M4 handle for thread tap M5 handle for thread tap M5 handle for thread tap UNF-6x40	nebulizer nebulizer nebulizer  mini-incubator mini-incubator mini-incubator mini-incubator mini shaker tools tools tools tools tools tools	PA12 PLA	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PCF-general PCF-general PCF-general PLA-general PLA-general PLA-general PLA-standard PLA-standard PLA-standard PLA-standard PLA-standard PLA-concentric PLA-concentric PLA-concentric PLA-concentric PLA-concentric PLA-concentric PLA-concentric PLA-concentric PLA-concentric

<sup>1)</sup> Polylactic acid, color of choice
2) Prusament PCCF Blend Carbon Fiber Black for heat resistance up to 140 °C and for solvent resistance
3) PLA matte is preferred to reduce light reflections inside the camera cabinet
4) Completely solvent resistant

#### **Preliminary remarks**

The exact printing of the 3D parts depends on various parameters, the 3D printer, the printer settings and the filament supplier.

Therefore, check e.g. with the plate-holder\_simple\_front (PLA), if the layers are printed well and smooth surfaces are obtained. Additionally, compare the external and internal dimensions with those in the slicer. In the worst case, the objects have to be modified in the CAD software.

#### PC Blend Carbon Fiber (PCCF)

PCCF can be printed with a standard brass nozzle for a while, but the nozzle will be damaged with time by the abbrasive filament. Therefore, a hardened steel nozzle is suggested. A ruby nozzle is the best, but is rather expensive.

As PCCF is rather soft as compared to PLA, it is not easy to remove support materials from freshly printed parts. Therefore, let the 3D-printed parts thoroughly cool down and partly crystallize, at least 12 hours. Then the support material is well separated and quite easy to remove without residues.

#### **Printer settings**

PCCF-general:

Layer height: 0.20mm

Perimeters: 4 Infill: 25% (grid)

Solid layers: 6 top and bottom

Support material:

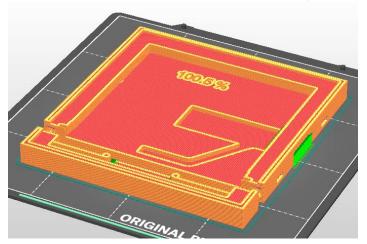
First layer density 30 % Top interface layers 3 Bottom interface layers 0 XY Separation: 150%

# Multi functional plateholder

In the slicer, scale both parts to 100.5%!!

The parts will shrink during annealing at 140 °C.

World coordinates	~ x C;̇̀̀̀̀̀̀̀̀̀̀	Y C;J	z (;)		
Position:	90	102.25	6.03	mm	
Rotate (relative):	0	0	0	•	
Scale factors:	100.5	100.5	100.5	%	
Size [World]:	128.64	110.05	12.06	mm	

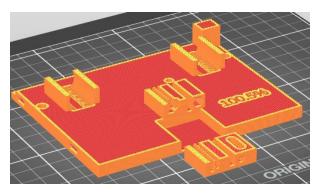


# Y-axis\_cart\_tensioner

In the slicer, scale the part to 100.5 %!!

The part will shrink during annealing at 140 °C.

No support material.



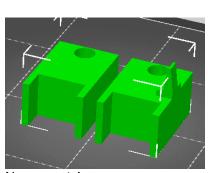


\*After printing and cleaning, heat both the plateholder parts and the y\_cart in an oven at 140 °C for two hours, resulting in heat stability.

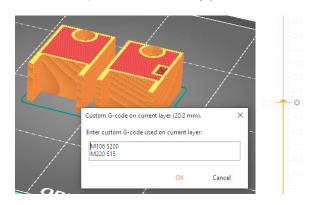
# **Autosampler sliders**

After slicing, move the slider to a height of 20.2 mm and add the custom G-codes M106 S200 (fan speed) and M220 S15 (print very slowly). Slice again.

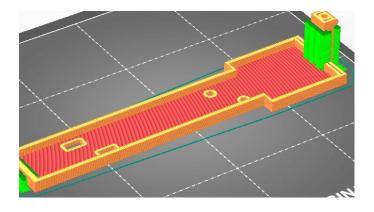
[After printing, reset the printer. Otherwise the next print will start slowly!]



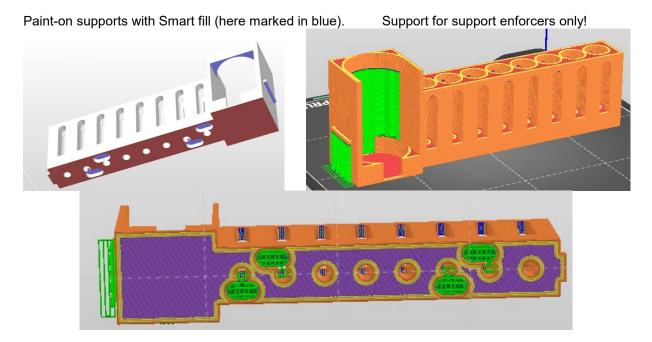




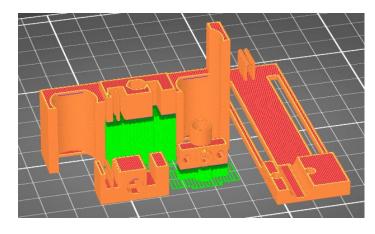
#### Vial-rack holder



# Vial-rack



# x-Axis (PCCF parts)

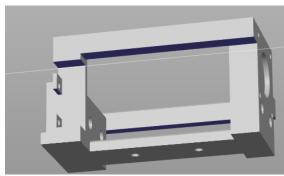


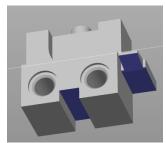
x-axis\_cart\_tensioner x-axis\_tensioner x-axis\_valve\_holder x-axis\_valve\_holder\_mount

Supports on build plate only!

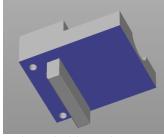
# Syringe pump

Paint-on supports with Smart fill (here marked in blue).





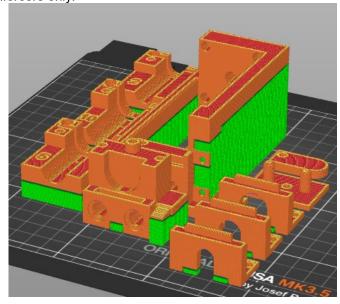
body pusher





syringe\_holder\_adapter pusher\_syringe\_adapter

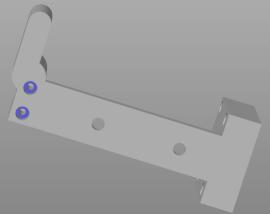
Support for support enforcers only!



# e-axis (PCCF parts)

Paint on support with smart fill (here marked in blue)

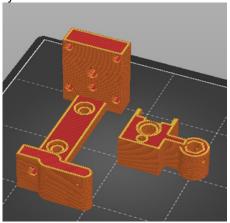




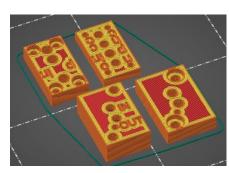
needle\_pusher

motor\_holder

Support for support enforcers only!

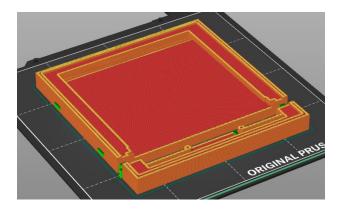


# Manifolds for Lee micropump and 3-way valve



No supports!

# Plate holder simple

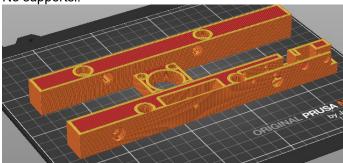


# PLA

PLA-strong: Layer height: 0.20mm Perimeters: 6 Infill: 70% (grid) Solid layers: 6 top and bottom

# y-axis

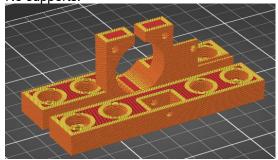
No supportsl!



y\_back and y\_front

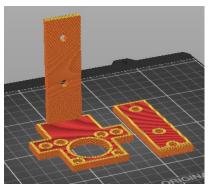
# x-axis

No supports!



x\_right and x\_left

# Autosampler (PLA parts)

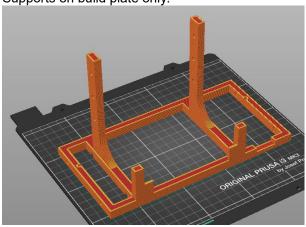


No supports!

motor\_holder, mounting\_profile

#### Camera cabinet holder

Supports on build plate only!



PLA-general:

Layer height: 0.20mm

Perimeters: 4

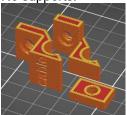
Infill: 25% (grid) Solid layers: 6 top and bottom

Support material:

First layer density 40 % Top interface layers 3 Bottom interface layers 0 XY Separation: 150%

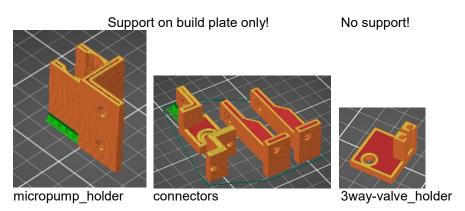
## x-axis

No supports!



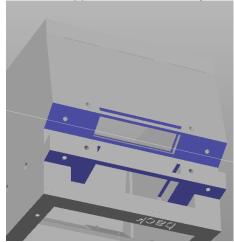
x-axis\_distance\_check\_left, x-axis\_cable\_guide\_top\_left, x-axis\_cable\_guide\_top\_right

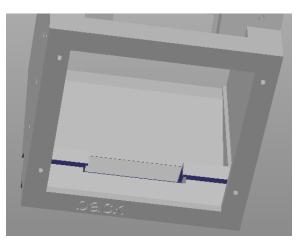
#### e-axis



# Camera cabinet

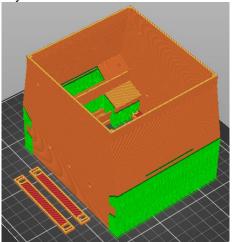
Paint-on supports with Smart fill (here marked in blue)



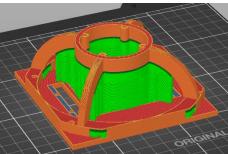


Camera cabinet

Supports for support enforcers only!

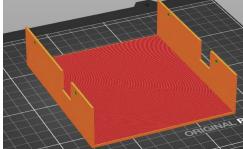


camera\_cabinet, UV-filter\_protect



Supports everywhere!

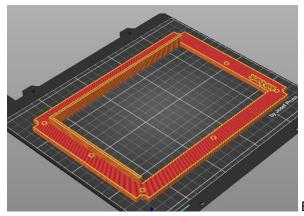
Camera\_top



No supports!

Camera\_facing

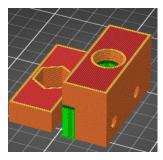
# **Frames**



Exemplarily shown for frame\_left\_back.

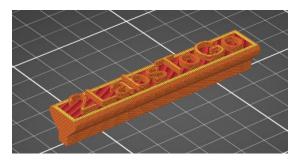
Frame\_front and frame\_back\_bottom need supports on build plate only!

# DC-power-jacket\_housing



Supports on build plate only!

# Front holder

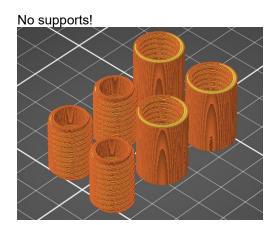


No supports!

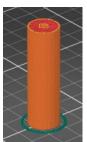
#### Feet

## PLA-general but infill concentric

Reduce the size of the parts with the external thread to 96.5% both in x- and y-direction







Handle for thread taps and allen keys

# PLA-standard:

Layer height: 0.20mm

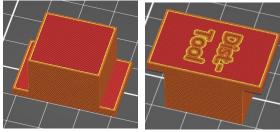
Perimeters: 2

Infill: 15% (grid) Solid layers: 4 top and bottom

Support material:

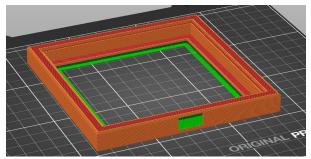
First layer density 40 % Top interface layers 3 Bottom interface layers 0 XY Separation: 150%

# Autosampler distance\_tool

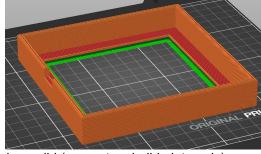


No supports!

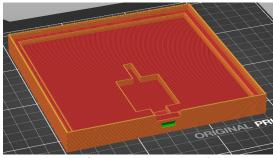
# **Mini-Incubator**



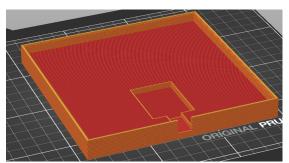
inner\_bottom (support everywhere)



inner\_lid (support on build plate only)

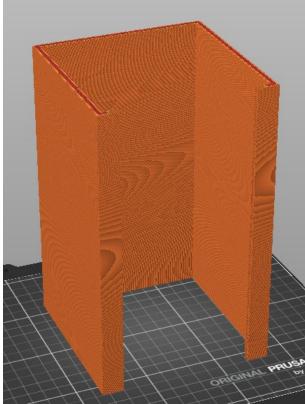


outer\_bottom (support everywhere)

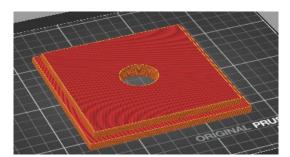


outer\_lid (no support needed)

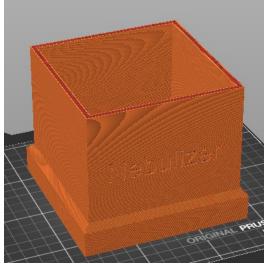
# **Nebulizer**No support needed for any part!



nebulizer\_chamber\_main

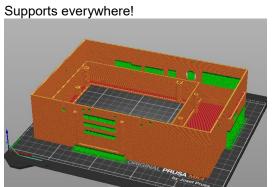


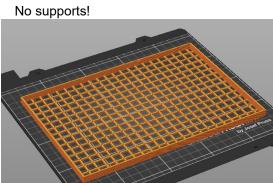
nebulizer\_chamber\_lid



nebulizer\_chamber\_extension

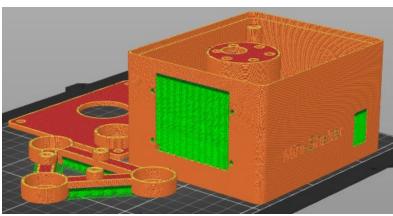
# **Electronic box**





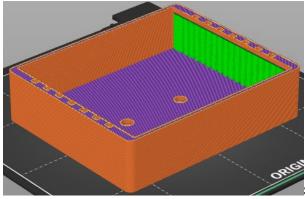
# Mini-Shaker

# PLA-general



Supports everywhere!

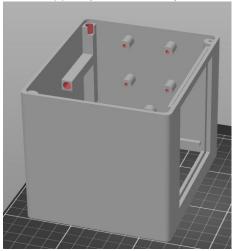
case, case\_cover; platform\_support



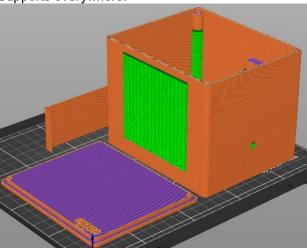
platform

# PLA-standard

Block support (marked in red)



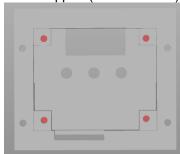
Supports everywhere!

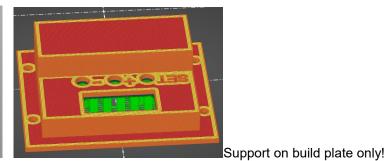


hood

hood, hood\_cover, cable\_support

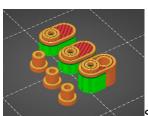
Block support (marked in red)





board-housing

# PCCF-general



Supports on build plate only! excenters, burlings, motor\_adapter

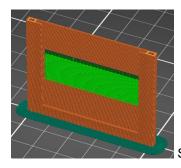
# **PLA** white

Layer height: 0.20mm

Perimeters: 4

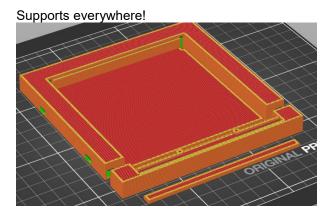
Perimeters: 4
Infill: 25% (grid)
Solid layers: 6 top and bottom
Support material:
First layer density 40 %
Top interface layers 3
Bottom interface layers 0
XY Separation: 0.2 mm

# **Electronic box – Label frame**



Support matrial everywhere! Brim!

# Backlight-plate holder



#### Polyamide (PA12)

# Remarks:

Polyamide filaments are hygroscopic and must kept dry! Otherwise water evaporizes in the hotend, preventing sticking onto the build plate.

The best build plate is the PA Nylon Powder-coated Steel Sheet (Prusa). Alternatively, the textured sheet can be used, together with a glue stick.

#### PA-general:

Print settings: 0.20mm

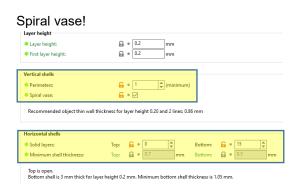
Filament settings: PA12 (nozzle 255 °C, bed 105 °C)

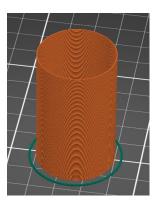
Perimeters: 4

Solid layers: 6 top and bottom

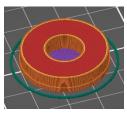
Infill: 25 % (concentric)

#### Rinsing vial, waste vial





#### Rinsing vial cap



Spiral vase deactivated!

#### PA-standard

Print settings: 0.20mm

Filament settings: PA12 (nozzle 250 °C, bed 100 °C)

Perimeters: 2

Solid layers: 6 top, 4 bottom

Infill: 15 % (gyroid)

#### **Nebulizer Atomizer**

No supports!

