Stamps

Project: lab journal

Authors: Geet Kalsulkar

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Testing various materials to make QR stamps

Table1

	Materials	Speed (mm/min)	Density (lines/mm)	Type	No of runs	Results	G
1	black divider film	600	20	L2L	1	failed bad	melting the material, non linear, bad resolution
2	rubber	200	12	L2L	1	miserable failure	laser has insufficient power to even etch the rubber surface
3	canvas square	50	NA	vector	1	no depth	paper on top , no good for stamping, no depth in engraving
4	cork coaster	2000	20	L2L	1	gift shop etching	burns quickly, very low resolution (crooked edges)
5	***WOOD!!!***	***600***	***20***	***L2L***	1	***MAGNIFIQUE***	good depth, high resolution, sharp edges
6	Black Agar						

Conclusion : Wood chips for stamp!!!

Testing different speed and density on Wood for depth and resolution of the stamps

Table2

	Size (QR) (mm^2)	Speed (mm/min)	Density (lines/mm)	no. of laser runs	Results
1	20x20	600	20	1	Magnifique, less depth
2	25x25	500	20	1	good, less depth requires intense cleaning to be scanned
3	25x25	600	20	1	awesome, good depth clean edges perfect for stamping

Optimal size for QR and its stamp to fit in petri dish (ϕ_{in} = 5 cm) with 2mm gap from the circumference

$s_{QR} = (\phi_{in} / \sqrt{2}) - 0.2$ cm

$= (5/\sqrt{2}$ cm$) - 0.2$ cm

$s_{QR} = 3.3355 \cong 3.40$ cm

preferred QR size 34x34 mm^2

media recipe

Introduction

here described are the recipes for the media needed in the lab for different organisms

Materials

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Procedure

LBV - LB media supplemented with NaCl to grow Vibrio

composition: 30 g/L NaCl, 10 g/L Triptone, 5 g/L yeast extract

LB - Luria

composition: 0.5 g/L NaCl, 10 g/L Triptone, 5 g/L yeast extract

LB - Lennox

composition: 5 g/L NaCl, 10 g/L Triptone, 5 g/L yeast extract

LB - Miller

composition: 10 g/L NaCl, 10 g/L Triptone, 5 g/L yeast extract

Overview of recipees

	A	B	C	D	E	F
1			**mass for**			
2		**chemical**	**1 L**	**0.5 L**	**0.25 L**	**0.1 L**
3	**LBV**	NaCL	29.5	14.75	7.375	2.95
4		L-broth	15.5	7.75	3.875	1.55
5	**LB - Luria**	NaCL	0	0	0	0
6		L-broth	15.5	7.75	3.875	1.55
7	**LB - Lennox**	NaCL	4.5	2.25	1.125	0.45
8		L-broth	15.5	7.75	3.875	1.55
9	**LB - Miller**	NaCL	9.5	4.75	2.375	0.95
10		L-broth	15.5	7.75	3.875	1.55
11						
12						