

```

lambda1 = 360*10^(-9); % basic wavelength
resolving_power = 0.6*10^(-9); % desired resolving power of 0.6 nm
lambda2 = lambda1 + resolving_power; % wavelength of the light which would be distinguished if resolving power is 0.6 nm
f_cam = 4.15; % focal length of the camera
pix = 2.44*10^(-6); % pixel size
syms d
equat = (f_cam*lambda2)/(d*sqrt(1-(lambda2^2)/d^2)) ...
    - (f_cam*lambda1)/(d*sqrt(1-(lambda1^2)/d^2)) == pix; % equation that was described above
sol = solve(equat,d) % = 0.00102049
num_of_gratings_per_mm = 1 / sol % = 979.919 , which is impossible to reach, therefore worse resolving power has to be chosen
resolving_power = 2*10^(-9); % new desired resolving power
lambda2 = lambda1 + resolving_power; % new second wavelength
equat = (f_cam*lambda2)/(d*sqrt(1-(lambda2^2)/d^2)) ...
    - (f_cam*lambda1)/(d*sqrt(1-(lambda1^2)/d^2)) == pix; % same equation
sol = solve(equat,d) % = 0.0034016
num_of_gratings_per_mm = 1 / sol % = 293.975 , which is now acceptable

```

JD2 vývojka / **taba CW - e2**

složka A

dest. voda 38°C 375ml  
katechol 10g  
vitamin C 5g  
siřičitan sodný bezv. 5g  
močovina 37,5g  
dest. voda 20°C do 0,5l

složka B

dest. voda 38°C 400ml  
uhlíčan sodný bezv. 30g  
dest. voda 20°C do 0,5l

A:B 1:1

JD2 bělička (vydrží 5 měsíců)

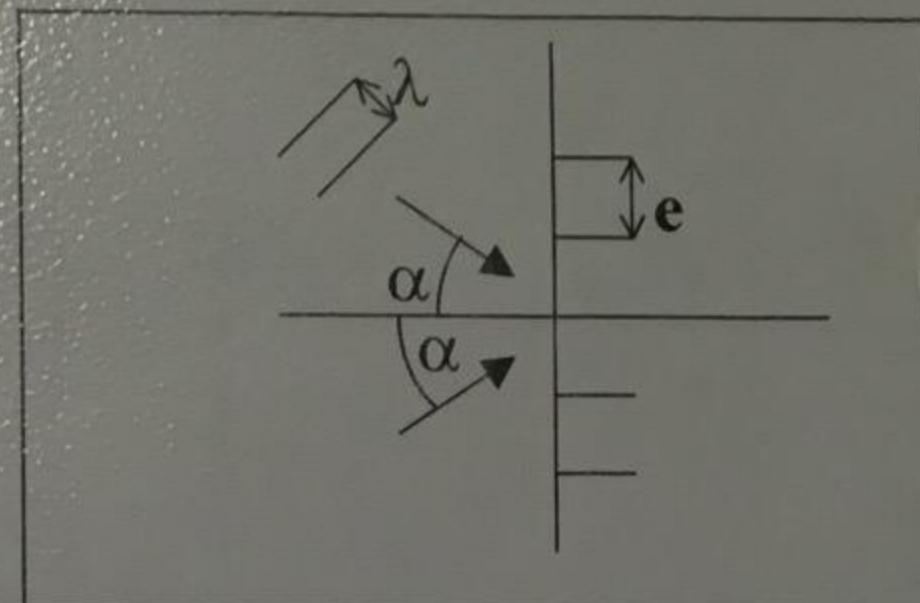
dest. voda 38°C 375ml  
dvojjchroman draselný 2,5g  
NaHSO<sub>4</sub> bezv. 40g  
dest. voda 20°C do 0,5l

Proces JD2

vyvolání 2min  
praní 3min  
bělení max 2min  
photoflo  
sušit na vzduchu

## Lineární hustota čar mřížky a úhel dopadu vln

$l$ [č./mm] lineární hustota	$\alpha$ [dílce] úhel dopadu	
100	32,2	1,81
200	64,5	3,63
300	96,8	5,45
400	129,3	7,27
500	161,8	9,10
600	194,6	10,94
700	227,5	12,80
800	260,7	14,66
900	294,1	16,54
1000	327,9	18,45
1100	362,1	20,37
1200	396,7	22,31
1800	617,2	34,72



$$e = \frac{\lambda}{2 \cdot \sin \alpha}$$

$$\sin \alpha = \frac{\lambda}{2} \cdot \frac{1}{e} = \frac{\lambda}{2} \cdot l$$

$$\alpha = \arcsin \left[ \frac{\lambda}{2} \cdot l \right] \cdot \frac{\pi}{180} \cdot \frac{6400}{360}$$

$\lambda$	vlnová délka záření	0,0006328 mm
$\alpha$	úhel dopadu vln	[dílce]
$e$	rozteč interferenčních proužků (mřížková konstanta)	[mm]
$l$	lineární hustota čar mřížky	[č./mm]