

## miś EXP

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- Gravity **14.5 BLG**
- ABV ---
- IBU **110**
- SRM **29.5**

### Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **13.9 liter(s)**

### Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.3 liter(s)**
- Total mash volume **15.1 liter(s)**

### Steps

- Temp **63 C**, Time **38 min**
- Temp **67 C**, Time **25 min**

### Mash step by step

- Heat up **11.3 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **38 min** at **63C**
- Keep mash **25 min** at **67C**
- Sparge using **6.4 liter(s)** of **76C** water or to achieve **13.9 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Melanoiden Malt	0.737 kg (19.5%)	80 %	40
Grain	Biscuit Malt	0.427 kg (11.3%)	79 %	50
Grain	Strzegom Pilzneński	0.208 kg (5.5%)	80 %	4
Grain	Pszeniczny	0.783 kg (20.7%)	85 %	4
Grain	Karmelowy Jasny 30EBC	0.66 kg (17.5%)	75 %	30
Grain	Strzegom Karmel 150	0.375 kg (9.9%)	75 %	150
Grain	Strzegom Karmel 300	0.587 kg (15.5%)	70 %	299

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	50 g	57 min	10 %
Boil	Lublin (Lubelski)	24 g	22 min	4 %
Boil	Lublin (Lubelski)	10 g	15 min	4 %
Boil	Lublin (Lubelski)	10 g	10 min	4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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us05	Ale	Slant	0.3 ml	fermentis
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