

## IP21

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- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **50**
- SRM **6.2**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **38 liter(s)**
- Trub loss **5 %**
- Size with trub loss **41.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **7 %/h**
- Boil size **46.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **35.4 liter(s)**
- Total mash volume **47.2 liter(s)**

### Steps

- Temp **65 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **2 min**

### Mash step by step

- Heat up **35.4 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **40 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **2 min** at **76C**
- Sparge using **23.2 liter(s)** of **76C** water or to achieve **46.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	8 kg (67.8%)	80 %	5
Grain	cookie	0.5 kg (4.2%)	80 %	50
Grain	Pszeniczny	1 kg (8.5%)	85 %	4
Grain	Karmelowy Czerwony	0.3 kg (2.5%)	75 %	59
Grain	Płatki owsiane	1 kg (8.5%)	60 %	3
Grain	Płatki pszeniczne	1 kg (8.5%)	60 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	50 g	60 min	15.5 %
Aroma (end of boil)	Amarillo	50 g	10 min	9.5 %
Dry Hop	Cascade	100 g	3 day(s)	6 %
Dry Hop	Centennial	100 g	3 day(s)	10.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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FM52 Amerykański Sen	Ale	Slant	280 ml	Fermentum Mobile
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