

## Panipani #4

- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU **40.2**
- SRM **8.3**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **14 liter(s)**
- Trub loss **0 %**
- Size with trub loss **14 liter(s)**
- Boil time **45 min**
- Evaporation rate **12 %/h**
- Boil size **16.13 liter(s)**

### Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16 liter(s)**

### Steps

- Temp **66 C**, Time **75 min**
- Temp **75 C**, Time **10 min**

### Mash step by step

- Heat up **12 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **75 min** at **66C**
- Keep mash **10 min** at **75C**
- Sparge using **8.1 liter(s)** of **76C** water or to achieve **16.13 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilsner (Weyermann)	2 kg	82.23 %	7
Grain	Viking Wheat Malt	1 kg	84 %	15
Grain	Barley, Flaked	0.6 kg	70 %	7
Grain	Oats, Flaked	0.4 kg	80 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	El Dorado	20 g	10 min	11 %
Boil	El Dorado	10 g	5 min	11 %
Boil	El Dorado	10 g	0 min	11 %
	Citra	25 g	60 min	12.5 %
	Cascade	25 g	0 min	4.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Wichrowe wzgórza	Ale	Liquid	ml	Fermentum Mobile

### Extras

Type	Name	Amount	Use for	Time
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Water Agent	Siarczan Magnezu (MgSO4)	5.12 g	Mash	60 min
Water Agent	Phosphoric Acid 85%	5 g	Mash	60 min
Water Agent	Chlorek Wapnia	2.66 g	Mash	60 min
Water Agent	Gips (Calcium Sulfate)	1.52 g	Mash	60 min
Water Agent	Sól	1.35 g	Mash	60 min