

## NO. 16

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **76**
- SRM **8.9**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **23.8 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.1 liter(s)**
- Total mash volume **24.2 liter(s)**

### Steps

- Temp **62 C**, Time **40 min**
- Temp **69 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **77 C**, Time **5 min**

### Mash step by step

- Heat up **18.1 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **30 min** at **69C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **77C**
- Sparge using **11.8 liter(s)** of **76C** water or to achieve **23.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	5 kg (82.6%)	81 %	4
Grain	Barley, Flaked	0.5 kg (8.3%)	70 %	4
Grain	Słód owsiany	0.5 kg (8.3%)	61 %	5
Grain	Briess - Extra Special Malt	0.05 kg (0.8%)	40 %	1200

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	15 g	45 min	13 %
Boil	Chinook	25 g	25 min	13 %
Aroma (end of boil)	Chinook	10 g	0 min	13 %
Boil	Summit	25 g	25 min	17 %
Dry Hop	Summit	25 g	5 day(s)	17 %
Dry Hop	Centennial	50 g	5 day(s)	10.5 %

### Yeasts

<b>Name</b>	<b>Type</b>	<b>Form</b>	<b>Amount</b>	<b>Laboratory</b>
Mangrove Jack's M29 French Saison	Ale	Dry	10 g	Mangrove Jack's