

## pale ale

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- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **34**
- SRM **5.8**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **28 liter(s)**

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5 kg (71.4%)	80 %	4
Grain	Monachijski	1 kg (14.3%)	80 %	16
Grain	Strzegom Wiedeński	0.5 kg (7.1%)	79 %	10
Grain	Karmelowy Jasny 30EBC	0.5 kg (7.1%)	75 %	30

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	30 g	60 min	12.5 %
Aroma (end of boil)	Crystal	50 g	1 min	4.5 %
Aroma (end of boil)	Centennial	50 g	1 min	10.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M44 US West Coast	Ale	Slant	150 ml	---

### Extras

Type	Name	Amount	Use for	Time
Spice	sumak	25 g	Boil	15 min