

## #09 American Pale Ale - 13,5 BLG

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **34**
- SRM **8.1**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **80 min**
- Evaporation rate **10 %/h**
- Boil size **26.1 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.33 liter(s) / kg**
- Mash size **17 liter(s)**
- Total mash volume **22.1 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **0 min**

### Mash step by step

- Heat up **17 liter(s)** of strike water to **75.2C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **14.2 liter(s)** of **76C** water or to achieve **26.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	4 kg (78.4%)	79 %	6
Grain	Strzegom Monachijski typ I	0.8 kg (15.7%)	79 %	16
Grain	Karmelowy Czerwony	0.2 kg (3.9%)	75 %	59
Grain	Strzegom Karmel 300	0.1 kg (2%)	70 %	299

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	60 min	15.5 %
Boil	Columbus/Tomahawk/Zeus	10 g	30 min	15.5 %
Boil	Centennial	10 g	10 min	10.5 %
Aroma (end of boil)	Centennial	15 g	0 min	10.5 %
Dry Hop	Centennial	25 g	7 day(s)	10.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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US-05	Ale	Dry	10 g	Fermentis
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## Notes

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*Aug 3, 2017, 3:13 PM*