

## #39 The Physics

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **42**
- SRM **18.8**
- Style **American Amber Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **25.9 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.9 liter(s)**
- Total mash volume **21.2 liter(s)**

### Steps

- Temp **65 C**, Time **75 min**

### Mash step by step

- Heat up **15.9 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **75 min** at **65C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **25.9 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	4.06 kg (76.6%)	79 %	6
Grain	Karmelowy Jasny 30EBC	0.31 kg (5.8%)	75 %	30
Grain	Crystal 150	0.23 kg (4.3%)	75 %	150
Grain	Special B Malt	0.7 kg (13.2%)	65.2 %	315

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Amarillo	25 g	60 min	8.5 %
Boil	Amarillo	12.5 g	30 min	8.5 %
Aroma (end of boil)	Bramling Cross	12.5 g	5 min	6.1 %
Aroma (end of boil)	Amarillo	50 g	5 min	8.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Slant	300 ml	---

### Extras

Type	Name	Amount	Use for	Time
Fining	whirlfloc	0.5 g	Boil	10 min