

## #9 a'la Guinness

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- Gravity **11 BLG**
- ABV **4.4 %**
- IBU **21**
- SRM **28.7**
- Style **Dry Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16 liter(s)**

### Steps

- Temp **65 C**, Time **80 min**
- Temp **70 C**, Time **10 min**
- Temp **77 C**, Time **10 min**

### Mash step by step

- Heat up **12 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **80 min** at **65C**
- Keep mash **10 min** at **70C**
- Keep mash **10 min** at **77C**
- Sparge using **17.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	2.5 kg (62.3%)	79 %	6
Grain	Monachijski	1 kg (24.9%)	80 %	16
Grain	Strzegom Czekoladowy jasny	0.06 kg (1.5%)	68 %	400
Grain	Strzegom Czekoladowy ciemny	0.2 kg (5%)	68 %	1200
Grain	Jęczmień palony	0.25 kg (6.2%)	55 %	985

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	East Kent Goldings	30 g	60 min	4 %
Boil	East Kent Goldings	30 g	15 min	4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale