

#9 a'la Guinness

- 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 |