

24 the marshal

- Gravity **16.6 BLG**
- ABV ---
- IBU **36**
- SRM **33.9**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **15 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **12 %/h**
- Boil size **28 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **23.9 liter(s)**
- Total mash volume **31.9 liter(s)**

Steps

- Temp **67 C**, Time **120 min**
- Temp **75 C**, Time **10 min**

Mash step by step

- Heat up **23.9 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **120 min** at **67C**
- Keep mash **10 min** at **75C**
- Sparge using **12.1 liter(s)** of **76C** water or to achieve **28 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---|-----------------|--------|------|
| Grain | Malting company of ireland - Irish Ale Malt | 4.85 kg (60.8%) | 80.5 % | 7 |
| Grain | Bestmalz - Cara Munich Type II | 0.24 kg (3%) | 75 % | 120 |
| Grain | Black Barley (Roast Barley) crushed | 0.48 kg (6%) | 50 % | 1300 |
| Grain | Weyermann - Pale Wheat Malt | 1.25 kg (15.7%) | 85 % | 4 |
| Grain | weyermann - abbey malt | 0.8 kg (10%) | 75 % | 45 |
| Grain | Bestmalz - Cara Aromatic | 0.36 kg (4.5%) | 78 % | 50 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------------|--------|--------|------------|
| Boil | Tradition | 70 g | 50 min | 5.5 % |
| Aroma (end of boil) | Hersbrucker | 30 g | 8 min | 2.3 % |
| Aroma (end of boil) | Huell Melon | 15 g | 8 min | 7.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------------------|-------------|-------------|---------------|-------------------|
| FM13 Irlandzkie Ciemności | Ale | Dry | 100 g | Fermentum Mobile |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-------------|---------------|----------------|-------------|
| Fining | Whirlfloc | 3 g | Boil | 10 min |