

FES#1 Lekka zadyma

- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU **35**
- SRM **31.5**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21.9 liter(s)**
- Total mash volume **29.2 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **21.9 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **13.2 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---|----------------|-------|------|
| Grain | Viking Pale Ale malt | 3 kg (41.1%) | 80 % | 5 |
| Grain | Viking Vienna Malt | 0.5 kg (6.8%) | 79 % | 7 |
| Grain | Monachijski typ II 20-254 EBC Viking Malt | 1 kg (13.7%) | 80 % | 20 |
| Grain | Viking Malt Wędzony Torfem | 1 kg (13.7%) | 81 % | 10 |
| Grain | Viking Malt Słód Owsiany | 0.3 kg (4.1%) | 61 % | 5 |
| Grain | Viking Malt Słód Barwiący | 0.25 kg (3.4%) | 65 % | 1300 |
| Grain | Viking Czekoladowy ciemny | 0.25 kg (3.4%) | 68 % | 1200 |
| Grain | Płatki jęczmienne błyskawiczne | 0.5 kg (6.8%) | 60 % | 3 |
| Grain | Viking Wheat Malt | 0.5 kg (6.8%) | 83 % | 5 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------|--------|--------|------------|
| Boil | lunga | 30 g | 60 min | 12.4 % |

| | | | | |
|---------------------|---------|------|--------|-------|
| Aroma (end of boil) | Fuggles | 30 g | 10 min | 4.2 % |
|---------------------|---------|------|--------|-------|

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------------------|------|-------|---------|------------|
| FM13 Irlandzkie Ciemności | Ale | Slant | 1300 ml | FM |