

Kooperacja Paki Rafat

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **7**
- SRM **55.6**
- Style **Christmas/Winter Specialty Spiced Beer**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **28 liter(s)**

Steps

- Temp **48 C**, Time **15 min**
- Temp **62 C**, Time **70 min**
- Temp **72 C**, Time **40 min**

Mash step by step

- Heat up **21 liter(s)** of strike water to **52.7C**
- Add grains
- Keep mash **15 min** at **48C**
- Keep mash **70 min** at **62C**
- Keep mash **40 min** at **72C**
- Sparge using **12.4 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|---------|--------------------------------|-----------------|-------|------|
| Grain | Viking Pale Ale malt | 4 kg (51.8%) | 80 % | 5 |
| Grain | Weyermann - Carafa III | 0.5 kg (6.5%) | 70 % | 1400 |
| Grain | Viking Czekoladowy ciemny | 0.5 kg (6.5%) | 67 % | 900 |
| Grain | Słód Kawowy Ciemny | 0.5 kg (6.5%) | 70 % | 500 |
| Grain | Płatki owsiane | 0.5 kg (6.5%) | 60 % | 3 |
| Grain | Brown Malt (British Chocolate) | 0.5 kg (6.5%) | 70 % | 128 |
| Grain | Słód owsiany Fawcett | 0.5 kg (6.5%) | 61 % | 5 |
| Adjunct | Powidła Śliwkowe | 0.722 kg (9.3%) | 30 % | --- |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-----------------------|--------|--------|------------|
| Boil | Saaz (Czech Republic) | 10 g | 50 min | 4.5 % |
| Boil | Saaz (Czech Republic) | 10 g | 30 min | 4.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
| S-33 | Ale | Dry | 11.5 g | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|-------|----------|--------|-----------|----------|
| Spice | Cynamon | 3 g | Boil | 30 min |
| Spice | Imbir | 3 g | Boil | 30 min |
| Spice | Goździki | 10 g | Secondary | 1 day(s) |
| Spice | Cynamon | 10 g | Secondary | 1 day(s) |
| Spice | Imbir | 10 g | Secondary | 1 day(s) |