

płynny piernik

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **12**
- SRM **7.8**
- Style **Christmas/Winter Specialty Spiced Beer**

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 **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.5 liter(s)**
- Total mash volume **14 liter(s)**

Steps

- Temp **68 C**, Time **45 min**
- Temp **70 C**, Time **15 min**

Mash step by step

- Heat up **10.5 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **45 min** at **68C**
- Keep mash **15 min** at **70C**
- Sparge using **18.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|----------------|---------------------------------|----------------|-------|-----|
| Grain | Pszeniczny | 1 kg (22.2%) | 85 % | 4 |
| Liquid Extract | Miód Gryczany (Buckwheat Honey) | 0.3 kg (6.7%) | 95 % | 40 |
| Grain | Płatki pszeniczne | 0.5 kg (11.1%) | 60 % | 3 |
| Grain | Płatki owsiane | 0.5 kg (11.1%) | 60 % | 3 |
| Grain | Karmelowy Pszeniczny Strzegom | 0.2 kg (4.4%) | 79 % | 150 |
| Grain | Strzegom Monachijski typ II | 1 kg (22.2%) | 79 % | 22 |
| Grain | Pilzneński | 0.3 kg (6.7%) | 81 % | 4 |
| Liquid Extract | miód rzepakowy | 0.7 kg (15.6%) | 95 % | 5 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil | Lublin (Lubelski) | 15 g | 60 min | 5.4 % |
| Aroma (end of boil) | Lublin (Lubelski) | 16 g | 10 min | 5.4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

| | | | | |
|---------------------------------|-----|-----|--------|-----------------|
| Mangrove Jack's M41 Belgian Ale | Ale | Dry | 11.5 g | Mangrove Jack's |
|---------------------------------|-----|-----|--------|-----------------|

Extras

| Type | Name | Amount | Use for | Time |
|-------|---------------|--------|---------|--------|
| Spice | curacao | 15 g | Boil | 30 min |
| Spice | cauracao | 20 g | Boil | 10 min |
| Spice | cynamon | 4 g | Boil | 10 min |
| Spice | cynamon laska | 2 g | Boil | 30 min |
| Spice | goździk | 6 g | Boil | 10 min |
| Spice | goździk | 5 g | Boil | 30 min |