

# 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 |