

## Kottozytto v2

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- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **23**
- SRM **9.9**
- Style **Roggenbier**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **75 min**
- Evaporation rate **15 %/h**
- Boil size **28.5 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.8 liter(s)**
- Total mash volume **21 liter(s)**

### Steps

- Temp **44 C**, Time **20 min**
- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **79 C**, Time **10 min**

### Mash step by step

- Heat up **15.8 liter(s)** of strike water to **48C**
- Add grains
- Keep mash **20 min** at **44C**
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **79C**
- Sparge using **18 liter(s)** of **76C** water or to achieve **28.5 liter(s)** of wort

### Fermentables

| Type  | Name                                     | Amount          | Yield | EBC |
|-------|--|-----------------|-------|-----|
| Grain | Weyermann - żytni                        | 2.5 kg (47.6%)  | 81 %  | 7   |
| Grain | Weyermann - Pilsner Malt                 | 1 kg (19%)      | 81 %  | 5   |
| Grain | Weyermann - Monachijski typ II 20-25 EBC | 1.25 kg (23.8%) | 80 %  | 20  |
| Grain | Weyermann - Cararye® żytni karmelowy     | 0.5 kg (9.5%)   | 70 %  | 130 |

### Hops

| Use for             | Name                            | Amount | Time   | Alpha acid |
|---------------------|---------------------------------|--------|--------|------------|
| Boil                | Chmiel Hallertau Tradition (PL) | 40 g   | 75 min | 4.5 %      |
| Aroma (end of boil) | Chmiel Hallertau Tradition (PL) | 20 g   | 10 min | 4.5 %      |

### Yeasts

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

|                          |     |     |        |                    |
|--------------------------|-----|-----|--------|--------------------|
| Fermentis Safbrew™ WB-06 | Ale | Dry | 11.5 g | Lesaffre Fermentis |
|--------------------------|-----|-----|--------|--------------------|

### Extras

| Type                    | Name           | Amount | Use for | Time   |
|-------------------------|----------------|--------|---------|--------|
| Other                   | Łuska ryżowa   | 100 g  | Mash    | ---    |
| Do wspomżenia filtracji |                |        |         |        |
| Fining                  | Mech irlandzki | 5 g    | Boil    | 10 min |