

# grand kwas

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- Gravity **20 BLG**
- ABV ---
- IBU **14**
- SRM **13.3**
- Style **Flanders Red Ale**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **75 min**
- Evaporation rate **4 %/h**
- Boil size **23.1 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.7 liter(s) / kg**
- Mash size **18.9 liter(s)**
- Total mash volume **25.9 liter(s)**

## Steps

- Temp **64 C**, Time **1 min**
- Temp **62 C**, Time **30 min**
- Temp **73 C**, Time **40 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **18.9 liter(s)** of strike water to **69.8C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **1 min** at **64C**
- Keep mash **40 min** at **73C**
- Keep mash **10 min** at **78C**
- Sparge using **11.2 liter(s)** of **76C** water or to achieve **23.1 liter(s)** of wort

## Fermentables

| Type  | Name                        | Amount         | Yield  | EBC |
|-------|-----------------------------|----------------|--------|-----|
| Grain | Pilzneński                  | 5 kg (71.4%)   | 81 %   | 4   |
| Grain | Strzegom Monachijski typ II | 1 kg (14.3%)   | 79 %   | 22  |
| Grain | Płatki pszeniczne           | 0.5 kg (7.1%)  | 85 %   | 3   |
| Grain | Special B Malt              | 0.25 kg (3.6%) | 65.2 % | 315 |
| Grain | caramunich                  | 0.25 kg (3.6%) | 70 %   | 120 |

## Hops

| Use for | Name                  | Amount | Time   | Alpha acid |
|---------|-----------------------|--------|--------|------------|
| Boil    | Saaz (Czech Republic) | 30 g   | 65 min | 3.5 %      |
| Boil    | Saaz (Czech Republic) | 20 g   | 25 min | 3.5 %      |

## Yeasts

| Name | Type | Form  | Amount | Laboratory |
|------|------|-------|--------|------------|
| s-33 | Ale  | Slant | 100 ml | fermentis  |

|                                       |     |        |       |            |
|---------------------------------------|-----|--------|-------|------------|
| WLP653 -<br>Brettanomyces<br>lambicus | Ale | Liquid | 30 ml | White Labs |
|---------------------------------------|-----|--------|-------|------------|