

# Lichtus z Kolonii

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **31**
- SRM **4.1**
- Style **Kölsch**

## Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **10 %**
- Size with trub loss **13.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **16.5 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9.3 liter(s)**
- Total mash volume **12.4 liter(s)**

## Steps

- Temp **45 C**, Time **10 min**
- Temp **53 C**, Time **10 min**
- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **9.3 liter(s)** of strike water to **49.2C**
- Add grains
- Keep mash **10 min** at **45C**
- Keep mash **10 min** at **53C**
- Keep mash **40 min** at **63C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **10.3 liter(s)** of **76C** water or to achieve **16.5 liter(s)** of wort

## Fermentables

| Type  | Name                    | Amount         | Yield | EBC |
|-------|-------------------------|----------------|-------|-----|
| Grain | Słód pilzeński STRZEGOM | 2.5 kg (80.6%) | 85 %  | 4   |
| Grain | Monachijski             | 0.3 kg (9.7%)  | 80 %  | 16  |
| Grain | Pszeniczny              | 0.3 kg (9.7%)  | 85 %  | 4   |

## Hops

| Use for | Name      | Amount | Time   | Alpha acid |
|---------|-----------|--------|--------|------------|
| Boil    | Tradition | 20 g   | 60 min | 5.5 %      |
| Boil    | Perle     | 20 g   | 15 min | 7 %        |

## Yeasts

| Name                  | Type | Form   | Amount | Laboratory       |
|-----------------------|------|--------|--------|------------------|
| FM42 Stare Nadreńskie | Ale  | Liquid | 50 ml  | Fermentum Mobile |

## Notes

- Fermentacja 19 stopni 6 dni  
refermentacja 6 dni  
leżakowanie 2 miesiące - 0-8 stopni  
*Jan 23, 2018, 2:46 PM*