KALTBACH

THE ART AND SCIENCE OF KALTBACH

HISTORY

22 MILLION YEARS AGO

- Formed during the LAST ICE AGE from sand that deposited in a shallow sea
- Layers of CLAY, QUARTZ, WATER and IRON deposits formed the sandstone cave

1953

- The cave has been used FOR AGEING CHEESE since 1953

1993

- Emmi acquired the cave in 1993

"THE CAVE IS WHERE *the magic happens.*"

EMMI CHEESE AGED IN THE KALTBACH CAVES CANNOT be replicated anywhere else in the world. The unique flavor, texture and appearance is the result of the artisan craft of skillful cheesemakers and affineurs as well as the unique geological make-up of the sandstone. The final masterpiece is a harmonious result of art and science.

The black patina remains a guarded secret of the Kaltbach cave-ageing process. It is a natural mark of the cheese's time spent in the cave.

ABOUT THE CAVE

The cave has unique microbes that allow distinct, metabolic processes to create one of a kind flavors. The sandstone develops a special relationship with the cheese, releasing and absorbing moisture as needed.

14000 WHEELS *of* EMMENTALER

40000 WHEELS *of* GRUYÈRE

1.4 MILES

50 *to* **53** DEGREES FAHRENHEIT

temperature & humidity ARE MAINTAINED BY THE *sandstone*

96% HUMIDITY

The cave climate ensures...
AROMA
DARK RIND COLOR
SMOOTHNESS & FLAVOR
CREAMY TEXTURE

The ARCHITECTURAL INTEGRITY *of the cave is* CHECKED EVERY 2 YEARS *by geologists.*

What's in the cave's sandstone?

- 40% QUARTZ
- 20% PORE VOLUME (enables water circulation)
- 15% CALCITE (acts as cement)
- 10% FELDSPAR
- 5-10% MICA
- 5-10% ROCK FRAGMENTS

PROCESS

The round holes in cheese, also called eyes, are bubbles of carbon dioxide gas produced by good bacteria in the cheese.

WHAT'S IN IT?

1 WATER

Water is extracted during the ageing process, CONCENTRATING ALL *other elements* TOGETHER.

2 FAT

LIPOLYSIS
TRIGLYCERIDE
FREE FATTY ACIDS AND GLYCEROL
FLAVOR & AROMA
Volatile free fatty acids generate flavor and aroma

3 SALT

IS KEY TO ENHANCING THE OTHER FLAVORS BEING CREATED.

4 PROTEIN

TYROSINE
THIS AMINO ACID IS A BUILDING BLOCK OF PROTEIN

Some of the free amino acids (TYROSINE) group together to create crystallization in the cheese

Tyrosine does not contribute much to flavor, but often signifies a well-aged cheese. Look for Tyrosine in the eyes of Emmentaler or Gruyère.

5 MICROBES

MOLDS + BACTERIA + YEAST = FLAVOR

Microbes and natural milk enzymes break protein into amino acids. Microbes eat the amino acids, metabolize and create certain flavors, such as fruity, nutty, and sweet.

KALTBACH LE GRUYÈRE SWITZERLAND AOP

16 dairies contribute to making LE GRUYÈRE AOP cheese

It ages in the caves in Moudon, Switzerland for 7 MONTHS

After 7 months, it is brought to KALTBACH

KALTBACH EMMENTALER SWITZERLAND AOP

3 dairies contibute to making EMMENTALER AOP cheese

After 3 months, it is brought to KALTBACH

Upon entering the KALTBACH CAVES a lab inspection is done to ensure basic composition and no adverse bacteria

It must score 19.5 / 20

- ✓ EYES
- ✓ FLAVOR
- ✓ TEXTURE
- ✓ ABILITY TO CURE
- ✓ EXTENDED CURING

Boards & planks provide a great environment for beneficial microbes to flourish. They naturally regulate moisture throughout the ageing process.

TURNING, WASHING & BRUSHING *with a brine solution every 7–10 days*

MONTH SEVEN 7 — FLAVOR, RIND COLOR, EYES, TEXTURE

Intermediary Control Check

MONTH TWELVE 12 — FLAVOR, RIND COLOR, EYES, TEXTURE

Released to CONSUMERS

Cheese is like a canvas, we brush it, care for it, speak to it. Each wheel is our own special masterpiece.
WALTER BURRI, *Production Manager*