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PHOTO CHEMIE
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EASY LITH

First dilute A und B to between 1+15 to 1+50. For example:

1+25 = 40ml Developer + 1000ml Water (A 20ml + B 20ml + 1000ml)

Overexpose the print by between 1 to 4 stops. The print exposure and the dilution of the developer influence each other, with small overexposures use 1+15 developer dilution, with heavier exposures use up to 1+50.

The final print image is independent of the paper and exposure:

Lots of light > higher dilution > longer development times > more intense colouring

Contrast is controlled by a combination of exposure and development time and it is not necessary to use colour filtration with VC type papers – its enough to expose with white light.

Short exposure = higher contrast, undeveloped middle tones, minimal colour
Long exposure = softer and colourful highlights

Development time is independent of the exposure time and the dilution, times of between 4 to 12 minutes are to be expected – do not expect the immediate image of VC papers. Continuous agitation of the print is recommended and do not allow the face or emulsion side of the print to come into stationary contact with the bottom of the developing tray.

Expect developing times from print to print to extend as oxidation by-products of the chemical process progressively slow development. To compensate, add fresh developer to regenerate the working solution.

Varying the A:B relationship:
Different effects can be achieved by varying the amounts of A and B solutions
More A = more colourful, harder, depletes more quickly
More B = softer, faster, lasts longer

Increasing the temperature of the developer to around 26-28 °C reduces development times by 30-40%. Note that with these temperatures the gelatine in the paper base can swell more than normal. Before toning, it is a good idea to first test whether the paper base should be hardened.

An introduction to Lith printing techniques along with picture examples can be found on the following websites : www.moersch-photochemie.com / Anleitungen / Daten und Know-How

An overview of common errors and their remedy can be found overleaf. The additives mentioned are only available in the Lith Master Set but they are available separately. Alternatively, your own homebrewed Sulphite or Bromide solutions can be used.

Problem	Cause	Remedy
Contrast too high	Underexposure	Increase exposure, dilute developer
	Negative too hard	Increase exposure & use two bath system
	Negative much too hard	Pre-flash paper, if necessary over threshold
Blown highlights with saturated blacks	Underexposure	Increase exposure
No saturated blacks	Too much sulphite	Reduce sulphite
	Underdeveloped due to overexposure	Decrease exposure or add Additive D
	Incorrect use of developer	Consult charts, refer fine-tuning
	Developer exhausted	Use new or refreshed developer
	Some Warm ton emulsions „Lith" brown/black	Short, sharp Selenium tone
Print too black, Lith width too wide	Overdeveloped	Pull print earlier or add Additive D
Print edges foggy	Safelight too light or wrong colour spectrum	Change safelight or add Additive D (bromide)
	Insufficient Bromide content for paper	Consult table , add Additive D
Black lumps or black flecks of different size, also at print edges, mostly after 3-5	Effects all Lith papers developed in highly dilute solutions	Stronger developer, increase Sulphite content New working solution after every print or
Especially with Maco Expo R	Developer need refreshing	Regenerate with Additive C (sulphite)
Small black points in highlights	Peppercorn effect	Increase Sulphite (+Additive C)
Flecks and uneven black patterns in Highlights and middle tones	"Chaotic infectious development" caused by exhausted developer & high semi-quinone content	Don't be sparing with developer – its cheap compared to paper.
Irregular black spots	Emulsion in contact with tray bottom & no agitation or print face up but not fully covered by developer.	Reduced amount of developer to avoid lifting – Always continuously agitate tray
Tiny, bright spots with darker edges, view -able by holding wet print to the light	Softening and damage to the Baryta layer due to lengthy development times.	Reduce development time or try more B solution
Toned print shows tiny stipples	As above. Spots only visible when the print is wet and then appear after toning	As above
Unsatisfactory tones in highlights	Not enough light or unsuitable paper	Change to a paper which take more colour., overexpose, use high dilution or add more D